ROYAL AGRICULTURAL SOCIETY
31 JUL 1907



BOROUGH OF PRESTON

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

URBAN AND PORT SANITARY AUTHORITIES,

FOR THE

Year ending December 31st, 1906.

H. O. PILKINGTON,
MEDICAL OFFICER OF HEALTH,
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Report of the Medical Officer of Health.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

Gentlemen,

Again it becomes my duty to submit for your consideration a Report dealing with the sanitary condition of the town during the past year, showing the amount of mortality which has been recorded and its various causes, and giving a brief resumé of the course of procedure which from time to time has been adopted to promote the sanitation of the town and improve and protect the health of its inhabitants.

Although I cannot commence this Report with the statement which has formed the preface to each of those for the two years immediately preceding, viz., that the rate of mortality has been actually the lowest recorded within the Borough, still the variation is so slight, and the increase in the death-rate so small, that the past year of 1906 may fairly claim to take its place amongst the years showing the lowest amount of registered mortality.

But as I have often pointed out in former Reports, the death-rate of a given town forms but an uncertain means by which of itself, to gauge the healthiness or otherwise of the inhabitants, since so much depends upon the composition of the population, the extent and boundaries of the area dealt with, and the very nature and prevalence of the diseases which have combined to form the total mortality for the year.

The increase observable in the mortality for 1906, over that recorded during the past few years, is mainly to be accounted for by the epidemic of Measles prevalent during the months of winter and spring, and the outbreak of Infantile Diarrhœa, which—though occurring somewhat later than usual, was severe in character, and even more than usually fatal in its effects. Further particulars with regard to both these diseases will be given when reviewing the various causes of death which go to form the total list of mortality.

From Small Pox the town has remained almost entirely free. A case admitted to the hospital early in December, 1905, was discharged just before the close of the year, and

nothing further was seen of this disease until early in May last, when a girl came under notice, suffering from a mild attack. She was at once removed to hospital, where she made a rapid recovery, leaving after a stay of a little over a fortnight. Towards the end of May, another girl, living in quite a different part of the town, but employed at the same mill, though in another department, developed a mild form of the disease. Like the previous case, she had good marks of primary vaccination, and after a slightly longer stay in hospital was discharged cured. The third, and only remaining case during the year, was that of a man, notified at the beginning of June. He made a good recovery in hospital, and was discharged at the end of a month. In none of these cases could the source of infection be definitely traced, though the fact that throughout the greater part of the year the disease was present in considerable force at Oldham, and that from time to time one or more cases occurred in neighbouring towns, rendered it possible for the infection at any time to be introduced into our midst. This would not be a matter of such grave import if it were certain that the whole of the rising generation has the protection which can alone be afforded by efficient vaccination; but there is reason to doubt if such is the case, and a single unvaccinated person, offering a nidus for infective germs, must be a menace to the safety of the whole community.

On the other hand, a population thoroughly and universally vaccinated and revaccinated would have little to fear from any outside introduction of the disease, since susceptibility to attack would be greatly reduced, while such chance cases as might occur would almost invariably be mild and harmless in their character and results. Under present conditions, hospital accommodation, immediately available, is a necessity, since the prompt isolation of the first case, or first few cases, may not unlikely be the means of cutting short what might otherwise develop into a serious and widespread epidemic. In this way the Ducker Hospital, situated at Holme Slack—though now showing the undoubted signs of wear and tear, inseparable from old age and active service—continued to be of the greatest use during the past year, affording accommodation for the cases referred to, and so permitting of their immediate removal from the crowded localities in which they occurred.

The mortality from Typhoid Fever was less than that of the previous year, although the reported cases of sickness were somewhat more numerous, 151 certificates having been received during the twelve months, so that the deaths—21 in number—gave a case mortality equal to 13·91 per cent. Although the months at the beginning and end of the year showed the greatest mortality, the cases of Typhoid Fever were fairly distributed over the whole twelve months, whilst in the same way they were not confined to any one district or locality, but, in proportion to the populations, were very equally divided throughout the different Wards of the town. An enquiry was made into the circumstances attendant upon each case, and

in some instances insanitary conditions were found upon the premises to which the disease might reasonably be ascribed. In a limited number of cases the infection was transmitted from the person first attacked to one or more members of the family, a result due to the difficulty of maintaining efficient isolation in an ordinary cottage home; but at no time was there anything approaching an epidemic, or even a series of cases, such as might result from an infected milk supply, or other centre of distribution.

The average age at death was somewhat higher than that usually met with; 11, or rather more than one half the fatal cases being registered as above the age of 25 years.

The deaths ascribed to Scarlet Fever amounted to 15, a number which, though higher than that of either of the two years immediately preceding, is considerably below an average spread over a period of six years.

In previous Reports allusion has been made to the general mildness which has now for some years characterised cases of Scarlet Fever, and, with very few exceptions, the same conditions were prevalent during the past year. This statement is borne out by the case mortality, which did not exceed 3·19 per cent. of the reported cases of sickness, the latter numbering 470, of which, as already stated, 15 terminated fatally.

But the undecided character of the symptoms, and the mild type of disease may have in themselves certain elements of danger, both to the patient and the general public. The initiatory febrile disturbance is slight, and the rash ill defined and of short duration, and as a consequence many cases escape detection until the peeling of the skin, accompanied perhaps with Nephritis, draws attention to what has been the true nature of the patient's illness. Meantime there has been no attempt at isolation, and no endeavour to protect the patient from the effects of cold or chills, conditions to which Scarlet Fever cases are especially liable, and which are so frequently followed by disastrous consequences to the patient's health in after life. Since the great majority of the cases occur amongst children of school-going age, it can be well understood how a single slight and undetected case may serve to spread infection throughout a large number of children in attendance at the same school. Several such instances have actually occurred, and the disease has eventually been recognized, but not until after a large and irreparable amount of mischief has been effected. Parents should view with suspicion any feverish attack in a young child, especially if it be accompanied with any blush or redness of the skin, or with the sore throat and strawberry-like tongue so often associated with even the very mild forms of Scarlet Fever. School Teachers should also constantly be on the look out for symptoms of a suspicious nature, and from time to time should make an examination of the children's hands, since desquamation following at an interval of about fourteen days after even only a mild illness of one or two days' duration, would give sufficient grounds for dealing with the case as one of an infectious nature.

At the beginning of the year, the epidemic of Measles which commenced in September, 1905, was rife throughout the town, and in my first monthly Report I had to deal with the deaths, from this cause, of 42 children, all with three exceptions under the age of 5 years.

A number of the Infants' Schools had been closed prior to the Christmas holidays, and on the conclusion of these in consequence of the continued presence of the disease amongst the attending children, it was found necessary in the case of certain schools to extend the closure for a further period of two weeks or a month.

The following is the list of the Schools so dealt with:—

St. Augustine's	Christmas holidays extended for 2 weeks
Do.	Closed for 1 month from Feb. 10th.
St. Joseph's	Closed for 2 weeks from Jan. 10th.
St. Saviour's	Christmas holidays extended for 2 weeks.
Do.	Closed for 1 month from Feb. 10th.
St. Michael's	Closed for 2 weeks from Jan. 8th.
Do.	Extended for 2 weeks from Jan. 22nd.
St. Andrew's	 Closed for 2 weeks from Jan. 8th.
Do.	 Closed for 1 month from Mar. 23rd.
Sacred Heart	.. . Closed for 2 weeks from Jan. 8th.
St. Mark's	 Closed for 2 weeks from Jan. 9th.
Do.	Extended for 2 weeks from Jan. 23rd.
Ashton Wesleyan	Closed for 1 month from Feb. 9th.
T. C. Hincksman Memorial	Closed for 1 month from Feb. 9th.
St. Stephen's	Closed for 1 month from Feb. 17th.
St. Mary's R. C.	Closed for 1 month from Mar. 30th.

The disease remained present in the town throughout the whole of the year, though it was in the months of winter and spring that the greatest mortality was recorded, the infection gradually dying out with the advance of summer. But with the close of the year there came a renewed amount of sickness and mortality, and it was in the hope of checking what was evidently a return wave of infection that I drew up the following placard which was extensively posted throughout the town, but especially in those localities where the disease was known to be present:—

MEASLES.

A Child NEED NOT have Measles.

To suppose that every Child must have Measles is a MISTAKE which has led to the deaths of many Children.

At present Measles cause more deaths amongst Children than any other Infectious Fever, due to Parents or Guardians neglecting to isolate those affected.

Immediately a Child shows the first signs of illness (flushed face, tender or running eyes and nose) it should be kept apart from all others, put to bed, kept warm, and Medical assistance should be obtained.

Children unaffected should be carefully kept away from any house where Measles exist, and should not be allowed to associate with anyone residing in such a house.

H. O. Pilkington,
Medical Officer of Health,
Preston Corporation.

I have every reason to believe that this was followed by good results; at any rate it afforded an opportunity for instructing the public on certain points connected with Measles about which much ignorance and apathy alike prevail. The disease is unfortunately regarded as one which a child must of necessity contract, and therefore little or no attempt is made to save it from the chance of infection. The serious nature of the illness, or rather its danger when attended by any of the chest complications with which it is so often allied, is not sufficiently recognised, and, although the epidemics occur, as a rule, during the coldest parts of the year, the patient is not sufficiently protected from dangerous chills. Whilst Small Pox is regarded with the greatest fear, Measles appears to give rise to but little anxiety, although for every death occasioned by the first-named disease, hundreds result from the second, and yet, without a doubt, by means of a little care and forethought, many of these latter might be prevented, and the role of Infantile mortality might in this way be greatly reduced.

It is pitiable to see so many lives sacrificed from this cause, since it is not too much to say that Measles is a disease which a child need not of necessity contract, and is one from which, under ordinary circumstances, and with proper care, it should recover. The total number of deaths which, during the past year resulted from this cause, was 122, of which 35 were infants under the age of twelve months, and 82 children between the ages of 1 and 5 years, whilst the remaining 5 exceeded the latter age, but were all under the age of 15 years.

Whooping Cough, which so frequently accompanies, or follows upon, an outbreak of Measles, only occasioned 11 deaths, and was absent during the first half of the year, but showed signs of gaining ground with the advent of the winter season. The following poster, drawn up on much the same lines as that relating to Measles, was affixed in various parts of the town, special attention being given to those districts in which the disease showed signs of becoming prevalent.

WHOOPING COUGH.

This—like Measles—is a disease which a child NEED NOT have.

It is fatal among young children, not so much from the cough itself, as from its being so frequently complicated with Bronchitis, &c., the result of the child taking cold.

It is infectious from the very commencement, even before the peculiar "WHOOP" can be heard, and is readily transmitted from one Child to another, especially in Schools, or where Children are gathered together.

For these reasons a Child, threatened with an attack, should be isolated, and kept warm indoors.

Once established, the disease is readily recognised by the cough, and parents allowing a Child in this condition to intermix with others are liable to a PENALTY NOT EXCEEDING £5.

H. O. PILKINGTON,
Medical Officer of Health,
Preston Corporation.

With regard to the mortality from Measles, Preston showed, with one exception—Burnley—the highest death-rate of any of the 39 large towns; whilst in something like 10 of these towns the rate from Whooping Cough was exceeded.

Although at one time it looked as if the Diarrhœal season was about to pass without any great amount of mortality, the outbreak, when it did occur, proved to be of more than average severity, and 219 deaths resulted from this cause, all of which, with few exceptions, were those of young children, and were registered during the early part of the autumn season.

The appended Chart shows how, immediately after the end of August, the mortality leaped up, the highest point being reached in the fortnight ending September 22nd, during which period 62 deaths were registered from this cause alone. That the outbreak was the Epidemic SummerDiarrhœa of infants is shown by the season at which the deaths occurred, and the ages at which they were recorded—186 being under the age of of twelve months, and an additional 28 between the ages of 1 and 5 years, leaving only 5, all elderly persons, to be accounted for—whilst the localities in which the sickness prevailed, and the deaths took place, give equally conclusive evidence that ignorance, dirt, and lack of proper nursing, are adjuncts necessary for producing the disease and bringing about its fatal termination. These points are clearly shown in Table No. 3, in which the deaths are divided amongst the various Wards, but still more by the Plan of Infantile Diarrhœa, upon which each death is marked down as nearly as possible at the exact spot at which it occurred.

That the feeding of the infant has much to do with the causation of this disease is well known,—indeed hardly requires naming—and therefore it is that the breast-fed child is comparatively immune. It is equally certain that, in the case of children who must be artificially fed, the milk with which they are supplied is often the vehicle by which the infective germs are conveyed into the system, and, since the milk supply of the better-class houses is frequently derived from the same source as that of the poorer quarters, it would seem that it is after reaching the consumer that the changes—so deleterious in their effects—are brought about.

In the cottage houses of the more crowded parts of the town it is of course a difficult matter, during summer, to keep the milk clean and cool, but much might be done in this direction by the exercise of a little more care and forethought.

Too often the milk, after being taken in, is left uncovered, in a warm situation, and exposed to the incursions of the swarms of flies which during the Diarrhœal season begin to invade these dwellings. It might at least be placed in a perfectly clean bottle, or covered vessel, which could be almost completely immersed in a pan of cold water, such water being from time to time renewed.

Such simple precautions, combined with strict cleanliness of all feeding utensils, would do much to reduce the amount of summer Diarrhœa, though they should be supplemented by attention to the personal cleanliness of the child, and by a greater use of the fresh air and sunlight so essential to its growth and wellbeing. Matters such as these come essentially within the province of household management, and therefore under the direct control of the house-mother, nor can the responsibility be evaded, or the duties thrown upon other shoulders. Municipal authorities can do much by improving the dwellings and surroundings of the working classes, by giving attention to the condition of dairies and milk shops, and so ensuring a certain degree of cleanliness in the process of milking and in the distribution of the milk, but all such efforts are discounted, and to a great extent rendered useless, if the milk is allowed to become contaminated in the interval between its delivery at the dwelling and its consumption by the infant, for whose maintenance it is intended. Still I am strongly in favour of all Sanitary Authorities, Urban and Rural alike, making full use of the powers conferred upon them by The Dairies and Milkshops Orders of 1879 and 1885. Let them see that in the first place the milk is drawn from healthy cows, kept under healthy conditions in clean, well-ventilated shippons, that the process of milking is carried out in a cleanly manner as regards both the cows and the person milking, and that the milk is afterwards cooled, sieved, and distributed in cans, or other vessels, that are each day thoroughly washed and sterilized.

The subsequent treatment of the milk, which will decide whether it is to remain a valuable article of food, or a possible poison, comes under the province of that Domestic education which in the near future will have so much to do in determining the health of the great masses of the community.

The Diarrhœal mortality amounted to 1·61 per thousand of the population, a rate which was exceeded in 7 of the other 39 large towns.

Diphtheria is a disease from which the town does not suffer to any great extent, and the deaths from this cause—16 in number—were below the average record of previous years. The notified cases of sickness amounted to 68, so that the case mortality was 23·53 per cent., in other words the deaths were not quite in the proportion of 1 to every 4 cases of reported sickness. The fatal cases were distributed over 9 of the Wards, although St. John's, with 5, and Deepdale with 3, together accounted for half the number.

Under the heading of Croup, only 9 deaths were registered, all cases reported, or certified, as Membranous Croup being included under the heading of Diphtheria

The deaths registered as due to Consumption—Pulmonary Phthisis—amounted to 122, a number singularly in accord with the figures referring to the same disease for many years past. The rate amounted to 1·04 per thousand, and was exceeded in almost all of the other principal towns. On the other hand, our rate of mortality from the other forms of Tubercular disease was higher than that of any of these large towns, possibly due to an excess of infantile deaths caused by some form of Tubercular deposit, but more probably owing to differences in the system of registering and tabulating deaths caused by Tubercle in one or another of its many variations.

The dangers connected with the spread of the Tubercle bacillus, the methods by which it is conveyed from the infected to the healthy person, and the best means for preventing the wholesale diffusion of such a dangerous enemy, are subjects upon which the public mind is gradually becoming better instructed.

It has been scientifically proved, and is probably now well known, that the germs contained in the expectoration of a Consumptive patient can, when dry, be readily carried about in the air. In this way they can be inhaled—drawn into the lungs—of any person breathing the air in which they are contained, and though in the great majority of instances no bad results may follow, still if the person so breathing such air be of susceptible temperament, if the soil upon which the germs alight be suitable for their growth and propagation, infection may take place, and the disease may be established, to be followed in the course of time by the usual fatal termination. Apart then from the filthy

nature of the practice, the habit of expectoration in the streets and public places is one fraught with danger to the community, and with the desire of combatting this evil, and in imitation of the example set by some other large towns, I have had notices bearing the simple request, "Please do not spit," affixed at street corners, near Public-houses, and at the entrances to mills and other places of business.

But if precautions like these are called for in order to prevent the germs of Tuberculosis being scattered at large by a case—possibly unsuspected—in the public streets, they are still more urgently demanded in dealing with the expectoration of a patient suffering from undoubted Phthisis, especially when, as is so frequently the case, the suffer is the occupant of a small house, and is consequently and of necessity brought into close contact with other members of the family. Infection of any kind is most readily contracted, under insanitary conditions, when the body is tired out, or when Nature is, as it were, off guard during the the hours of sleep, and so it becomes easy to understand how a person in advanced Consumption, sleeping in a close ill-ventilated bedroom, must be a veritable source of danger to the other occupants, probably members of the same family, and therefore not improbably with an hereditary tendency to contract and develop the disease.

I have drawn up, and had printed, in the form of a small card, a short list of instructions as to what should be done, and what precautions should be adopted, under circumstances of this kind; and have then forwarded a supply of these cards to the various medical practitioners of the town, with a request that they would distribute and make use of them whenever they considered it necessary or advisable.

CORPORATION OF PRESTON.

HEALTH DEPARTMENT.

All Sputum—i.e.—the matter coughed up by any person suffering from an Affection of the Lungs, Throat, or Air passages, contains great quantities of very minute invisible germs. Some of these may be harmless, but the majority are dangerous and infectious—i.e.—are capable of conveying disease from the sick to the healthy.

If the Sputum is allowed to become dry, the germs float about in the air, and are readily absorbed by any person coming into contact with them.

For this reason every person suffering from a cough should use a suitable spittoon, a small vessel of earthenware or glass. This should contain a small amount of disinfectant, and after being emptied should be thoroughly cleansed and again charged with disinfectant.

On no account should the patient swallow his Sputum, as—if the disease be infectious—he may in this way continue to infect himself, and so prevent a cure.

Great care should be exercised in the bedroom, especially if it be occupied by any one in addition to the patient.

The practice of spitting against the wall, or against a piece of paper attached to the wall of a bedroom, is especially dirty and dangerous.

The habit of spitting in public places, besides being a dirty and repulsive one, is dangerous to the Public Health.

The dangers attendant upon smoking in the young are greatly increased by constant spitting, as in this way the saliva, necessary for the digestion of the starchy portion of the food, is wasted.

In conclusion, the Health Committee would ask all persons who spit *unnecessarily* to desist from a habit hurtful to themselves and annoying to others; and those who are *compelled* to spit, to do so with as little offence and danger as possible to the community.

Bronchitis and Inflammation of the Lungs accounted respectively for 236 and 104 deaths, the numbers being very similar to those from the same causes during the preceding year. Most of these deaths occurred among the very young, or persons past the middle period of life, diseases of this kind being most fatal at the extremes of age, just as they are most prevalent at the beginning and towards the end of the year. Out of the combined 340 deaths only 30 were registered during the months of July, August, and September.

Under the heading Teething, Premature Births, and Debility, the deaths of 379 children were recorded, and of these 317 were infants under the age of twelve months, 54 were children between the age of 1 and 5 years, and the remaining 8 were children whose age at death exceeded the last-named period. It has already been shown that a large proportion of the Diarrhœal deaths—186—were those of infants, and if these, together with the infantile deaths from Measles, Bronchitis, Pneumonia, and other causes be added to the 317 from developmental diseases, a total is reached of 665 deaths under the age of one year. This represents an infantile death rate of 200 to every 1000 births, in other words, one-fifth of the children born failed to survive the first year of their lives. That many of them died almost immediately after birth is shown in Table No. 5 A, in which these deaths are divided into shorter periods; in weeks as regards the first month, and afterwards, under the heading of each month up to the end of the year. The various contributing causes are also more minutely sub-divided, so that the Table in question gives a detailed and accurate record of the infantile mortality. The fact that so many of these children die so shortly after birth points to the necessity for prompt assistance, and this was recognized at the Congress on Infantile Mortality held at Westminster in June, 1906, the outcome being a resolution calling for more speedy registration of all births. The present interval of six weeks which may elapse between the birth of a child and the knowledge of that birth reaching the Medical Officer of Health is too long, and not unfrequently the Health Visitor arrives too late to be of any assistance in the case of a child, weak, ailing, or prematurely born.

The deaths attributed to Old Age, as meaning a natural loss or failure of vital power, without any actual disease, amounted to 86, a number below that from the same cause for some years back.

Violence, &c., accounted for 61 deaths, of which two were due to murder, 15 to suicide, and the remainder to various forms of accident.

The remaining deaths, 664 in number, are grouped together under the heading "Other diseases," but in Table 4A further information is given as to many of the diseases which have contributed to this mortality. Two of these—Erysipelas and Puerperal Fever—deserve further mention, since they belong to the group of Zymotic Diseases, and are compulsorily notifiable under The Infectious Diseases Notification Act. With regard to the first-named—Erysipelas—certificates were received of 69 cases, but the majority were of slight importance, many of them being of the recurring type, and only 3 deaths resulted from this cause.

The cases of Puerperal Fever were fortunately less numerous than usual, certificates being received with regard to 4 cases, of which 2 terminated fatally. In no instance was there any reason to believe that the infection had been derived from a previous case, all possible precautions were taken, and none of the cases were followed by any further outbreaks.

Throughout the year there was recorded a total of 3,317 births, which number represented a rate of 28·49 per thousand of the population, and showed a natural increase of 1,252 lives for the twelve months.

The recent alarming decrease in the number of births, to which allusion has of late, and year by year, been made, will perhaps be better understood when it is considered that 50 years ago, at a time when the population did not exceed 80,000, the yearly return of children born within the town was equal to that of the present day.

This deals with the actual number of children born, not with the birth-rate per thousand, and therefore is not influenced by the question as to whether, either then or now, the population was, or is, under or overestimated. This estimation of a town's population, based upon a decenial census, is but unsatisfactory, and it seems somewhat remarkable that while the enumerated population ten years ago was only about one thousand less than at the present time, the natural increase—the excess of births over deaths—during that ten years amounts to at least eleven thousand. Therefore, if the figures be true, in spite of increased trade, and enlarged factories and workshops, the number of persons leaving the town must have been at the rate of one thousand each year more than came into it.

The appended Tables and Plans give further details as to the births and deaths during the year. Any apparent discrepancy between the Tables containing the Borough

figures, and those from the Registrar General's Returns, is due to the latter, including the deaths at the Workhouse, which, being situated outside the town, is not dealt with in our own returns.

The work done by the Sanitary Inspectors, each in his respective district, is set forth in Table No. 9, and the summary shows, accurately and without any exaggeration, a large amount of useful work accomplished during the year. But even this does not altogether represent what has been done to remove insanitary conditions, and to promote sanitation throughout the town.

An efficient Inspector must have a minute and accurate knowledge of every part of his district, and must not only be ready to remove—if necessary by statutory notice—undoubted nuisances which he may find to be existing, but, by his very vigilance and supervision, he must prevent the commission of many offences against the laws of health. He knows those parts of his districts which require most frequent inspection, those trades aud occupations which, with a little laxness and want of care, may become nuisances to the neighbourhood, and it is here that his frequent, but unexpected, visits do so much to keep things in a sanitary and satisfactory condition. Work of this kind cannot be exactly tabulated, or set down under any particular heading, but nevertheless it has much to do with the reduction of disease, the promotion of comfort, and the general healthiness of a town. Again, an Inspector must not only be quick to detect and remove insanitary conditions, but he must be prepared to give the benefit of his advice and experience to anyone desirous of altering his property with a view to improving the sanitation of his surroundings, and to advise how such work may be done in the best and most economical manner. All this is useful work, involving considerable expenditure of time and trouble, and yet it cannot be shown to its full extent in any table or schedule of work accomplished.

In addition to Table No. 9, which gives a general summary of the work done in the town during the past year, Tables 10 and 11 deal with the Factories and Workshops, giving a list of all the different trades recorded in the Register, together with a summary of the visits made, the defects or nuisances found to be existing, and the action taken for the remedy of any such defects or nuisances. Still further particulars are given in the somewhat lengthy Table 6 A, supplied by the Local Government Board, which also contains information as to Homework and other matters.

These combined Tables show the supervision that is kept upon the health of the working man, not only at his home, but also at his place of work. This is a necessary condition since much of his life must needs be spent in the Factory or Workshop in which he pursues his calling and gains his livelihood.

The number of offensive trades in the town is but few, whilst those absolutely dangerous are practically wanting, but of recent years great improvements have been made in the sanitary condition of the Factories, and those Workshops in which ordinary trades are carried on.

Ventilation has been improved, more cleanly conditions are required, whilst the sanitary accommodation—to which in former years little or no attention was given—has been increased in amount, greatly improved in position and character, and—where men and women are both employed—effectually separated as regards the sexes. These are matters which affect not only the health, but the moral tone and self respect of the worker, and a strict enforcement of the Act referring to them must needs help to raise the social status of the classes for whose benefit it has been framed.

The work of converting privies and ashpits to water closets and movable ashpails has been carried on in Nos. 1 and 2 Districts, that is, in the centre and towards the north and eastern sides of the town, the work of conversion having been practically finished in the other districts. Notices to the number of 939 have been sanctioned and served for improvements of this kind, but in addition there are other works which have either been voluntarily put in hand by property owners, who have recognised the improvement resulting from such alterations, or which have been done upon the suggestion of the Inspector, without the necessity of resorting to formal notice.

Progress has also been made in the work of substituting flags for the pebble pavement, which in the case of so many cottage houses forms the unsatisfactory, and generally the defective, covering of the back yards and passages; but this work has been more general and more evenly distributed over all parts of the town. The power to require this flagging of back yards was not obtained until 1900, and consequently in the case of many houses in which the conversion from the privy-midden system to that of water carriage was carried out before that date, the cobble yard pavement was allowed to remain, and these cases have since had to be gradually dealt with.

I have often adverted to the marked improvement which follows the conversion of the privy-midden system to that of water carriage and the flagging of the back yards and passages, even in the worst parts of the town, and this, not only with regard to the character of the property itself, but also as affecting the social conditions and morale of the tenants. If careless, negligent, and drunken tenants cause a locality to become squalid and insanitary, it is equally certain that in many cases a man's surroundings react upon his mode of life and general character, and so improvements in his house and home have at least a tendency to improve his manner of living.

So much of the Health Visitors' work as is capable of tabulation is set forth in Table No. 12, and even from this general and imperfect summary an idea may be gained of the line of work carried out, and the results aimed at, and often—though not always—attained.

The visits made to houses, in suitable localities, in which a birth has recently taken place, gives the Visitor an opportunity of giving a little kindly advice on the nursing of the child, as well as on household sanitation, and this at a time when such instruction is especially valuable. And because in many cases the infant is delicate and the mother inexperienced, the sooner such visits can be made the more likely they are to be productive of good, and it is for this reason that early notification of births is so desirable. The subject was dealt with at the National Congress on Infantile Mortality, held in June last, and the result will probably be either that the time allowed for the registration of a birth—at present six weeks—will be shortened, or that some means will be adopted by which notification of every birth will at once be conveyed to the Health Department.

The midwives, enrolled on the Register for 1906, were all visited at their own homes by the Health Visitors, and a report was furnished as to their personal cleanliness, and the condition of their houses, bags, and appliances. In addition, I personally saw each midwife, and examined her outfit and register. Certain of them were also interviewed at other times in consequence of reports received, or circumstances attendant upon cases in which they had been engaged. In some instances a caution was necessary, or instructions were given as to their future conduct, but throughout the year it was not necessary to suspend any midwife, or make a formal report to head quarters.

Not only when Small Pox was known to be in adjacent towns, and when its introduction by tramps was an everyday possibility, but throughout the whole of the year the Common Lodging Houses have been regularly and frequently inspected. In dealing with them the great difficulty lies with those which have not been built for the special purpose, or even adapted from suitable large buildings, but have been formed out of one or more cottage houses. Still, wherever improvements could be enforced, they have been carried out, and close attention has been given to the cleanliness and general up-keep of these establishments. Prosecutions were instituted in five cases against the keepers of these Lodging Houses for not being registered, for overcrowding, or for non-separation of the sexes, and fines varying in amounts from 40/- to 2/6 and costs were imposed.

Very little change has taken place as regards the Canal Boats which ply upon that portion of the Preston, Lancaster, and Kendal Canal which lies within the boundaries, and so comes under the jurisdiction, of this Sanitary Authority. Their general condition, especially as regards cleanliness, has been most satisfactory; and though the airspace allowed for the cabin sleeping accommodation is exceedingly small, it is to a great extent atoned for by the open-air lives of those working, and living upon, the boats.

The following Report, forwarded to the Local Government Board in March last, gives a summarized description of the general condition of the boats, and of such changes as have taken place during the previous year :—

County Borough of Preston.

CANAL BOATS ACTS, 1877 AND 1884.

The following Report deals with the condition of the boats plying on that portion of the Preston, Lancaster, and Kendal Canal situated within the boundaries, and coming under the control of the above-named Sanitary Authority.

As for many years past, the supervision of the boats has been carried out by Inspector H. Livesey, who combines this work with his duties as Sanitary Inspector, without special remuneration.

One boat—the "Fanny" No. 3—has been broken up during the year, making the number of Registrations cancelled 21, and reducing the number of boats now remaining on the Register to 33.

All these Boats have been visited at various times during the year, as have also several boats registered at Lancaster.

Infringements of the Acts and Regulations were found to be existing on 15 of the boats, 6 of these relating to the Certificates, and 9 to want of painting. With the exception of one of the last-named cases, all were at once remedied upon the representation of the Inspector, the exception being that of the boat Florence, the owner of which has, however, promised that the work shall shortly be put in hand.

In no instance has it been found necessary to take legal proceedings, nor has any obstruction been offered to the Inspector in the discharge of his duties. In the case of the boat "Joseph," the certificate has been renewed upon change of ownership, and advantage was taken of the opportunity to effect a reduction in the number of occupants.

No case of Infectious disease has been reported, or has otherwise come under observation ; nor has any child of school-going age been met with on board any of the boats. The total number of occupants on the boats is :—Males 146, females 59, children 53. The following Table gives particulars for the past ten years :—

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
No. of Inspections ..	143	61	65	38	68	96	103	105	113	111
Do. Males ..	152	45	44	48	88	104	113	140	142	146
Do. Females ..	18	23	20	26	40	48	38	64	71	59
Do. Children ..	18	28	21	32	48	46	29	53	68	53

I append the usual Statistical Supplement.

H. O. Pilkington,
Medical Officer of Health.

February 11th, 1907.

Under the Food and Drugs Adulteration Act, samples of various articles to the number of 255 were purchased and submitted to analytical examination. Of this number 221 proved to be of genuine and satisfactory character, whilst 34 were either adulterated or were not of the nature and substance which the purchaser had a right to expect. Of these unsatisfactory articles 3 were coffee, adulterated with chicory in amounts varying from 5 to 65 per cent. In each instance the vendor received an official cautionary letter, since, despite the large amount of adulteration in the last-named case, there were circumstances which, in the opinion of the Committee, rendered further proceedings unnecessary. Nine cases were those of milk, which either showed a deficiency in the amount of butter-fat, or else, from the low percentage of solid matter, gave evidence of added water. In five cases the vendors received cautionary letters; in the other four further proceedings were taken, and these terminated in payment of costs; or in fines varying from 10 to 20 shillings in amount. A caution was also given in a case where a sample of milk was found to contain an excessive amount of preservative. Milk is an article of such supreme importance as an infant's food, that all who deal in it should recognize that they are responsible for its being of genuine quality. The accepted standard—3 per cent.—of butter-fat is by no means excessive, and though an occasional cow may be found which fails to give this percentage, the milk of a number will—if unadulterated—certainly come up to this standard. At any rate, "Milk" is supposed to contain this amount of cream, and it is for the dealer in milk to see that he supplies an article such as the purchaser is justified in expecting. Continued leniency in dealing with cases in which the milk fails—it may only be by a little—to come up to the required standard, encourages the abstraction of cream, and there is reason to fear it has already led to a deterioration in the quality of milk sold.

In addition to the 255 samples officially purchased—i.e., with the formalities required by the Act—an additional 71 were, by direction of the Local Government Board, obtained in an informal manner. The object of this latter procedure is to obtain a knowledge of the character of certain articles, which will afterwards serve as a guide for subsequent formal purchase.

In addition to those already mentioned, the cases in which it was necessary to have recourse to legal proceedings were few in number, and, with one exception, of no particular importance.

For infringement of the Bye-laws with regard to the storage and removal of offensive matter, a marine store dealer was fined 10/- and costs. Certain pigeons kept in an unsuitable place, and so causing a nuisance, were ordered to be removed.

A quantity of unsound and decomposed fish was seized whilst being offered for sale on the public market, and was condemned by order of a magistrate. Subsequent proceedings against the person in whose possession the fish was found resulted in the imposition of a fine amounting in the aggregate to £2 2s. od., together with costs.

The exceptional case to which I have referred was simple as to the facts and circumstances, but was the cause of much expenditure of time, trouble, and money. The trap, over which the scullery sinks of a large hotel discharged, was an ordinary iron surface gulley of antiquated pattern, and consequently was unable to perform the functions required of it as a grease trap. It was situated in a public thoroughfare, and when, as repeatedly happened, it overflowed, the greasy matter was deposited on the pavement, to the discomfort and annoyance of a neighbouring merchant and his employés, and, as was stated, to the detriment, especially in hot weather, of their health. Whenever this occurred, as it did from time to time during some years, the owner of the hotel and gully, upon representation from the Health Office, abated the nuisance, and for the time set matters right. At length more urgent complaints were received, demanding not only that the nuisance should be abated, but that its recurrence in the future should be prevented. Upon this, notice was served requiring that the existing inefficient gully should be replaced by a proper and sufficient trap. This notice was not complied with, and proceedings were taken, and in due course the case came before the Borough magistrates. After hearing evidence on both sides, an order was made that the notice must be complied with, a month's time being allowed for the purpose. The defendant gave notice of appeal, and after certain unavoidable adjournments, the case came up for hearing before the Court of Quarter Sessions. Eminent Counsel were retained on both sides, and expert witnesses were called from various parts of the country. From the first it was evident that the Court was in favour of a settlement, and after some evidence had been given, it was arranged that the present trap should be replaced by one to be approved and fixed by the Corporation (practically as decided by the Borough Magistrates), but the appeal would be allowed and each side must pay their own costs. So that eventually the work—which in the first instance would have cost some few shillings—was done at the expense of some hundreds of pounds, of which sum the Health Authority, in its desire to safeguard the comfort and health of the public, had to pay its full share. Without actually endorsing the opinion of a much quoted Parochial Official, one is forced to the conclusion that about the Law there is at least a glorious uncertainty.

Amongst other work done during the year with a view to the improvement of the appearance of the town, and the health of the people, must be mentioned the sett paving and flagging of a large number of streets, areas to the extent of 28,173 and 20,404 square yards having been in these ways respectively dealt with.

At the time of writing this Report the Isolation Hospital, so long required for the effective treatment and isolation of Infectious disease, has been formally opened, and has received its first patients. As, however, the opening did not take place during the past year, it is a subject which cannot be dealt with in this Report.

In addition to being present at the National Conference on Infantile Mortality, to which allusion has been made, and at which certain resolutions likely to be productive of much good, were arrived at, I had the privilege, in company with your Chairman, of attending the Sanitary Institute Health Congress held at Bristol. Numerous papers, wide-reaching in character, but all having a bearing on sanitation, and the prevention of disease were read; and from them, and the discussions and interchange of opinion which followed, much that was interesting and instructive could be gained.

H. O. PILKINGTON,

June 29th, 1907. Medical Officer of Health.

PORT SANITARY.

The return for the past year, which I have to present to you as the Authority dealing with sanitary matters at the Port of this town, shows that an increased number of vessels—chiefly Steam Ships—have been boarded and examined.

The result of such inspections has been satisfactory, whilst the defects found to be existing have been of the usual description, and have received attention, and been remedied, as a rule with commendable promptness, upon the requisition of the Sanitary Inspector. Most of them relate to the condition of the forecastles, or other environments of the crew, and are not seldom due to the carelessness and apathy of the latter with regard to cleanliness and general sanitation.

Still, when so much attention is being given not only to the homes of the working classes, but also to the mills, factories, and workshops in which they earn their living, it would seem only right that a little more notice should be taken of the conditions under which the crews of steamships and sailing vessels alike, spend a considerable portion of their lives. It is true that when at sea they have perhaps a superfluity of fresh air, and that space on a ship is every where of value, but even these facts do not atone for the dark, stuffy, illventilated, and often overcrowded forecastles. The latrines and waterclosets are small and dark, and often so situated that, should any defect arise, the resulting nuisance is very perceptible in the forecastle—the living and sleeping quarters of the crew.

With one exception, the cases of illness occurring on board the vessels entering the Port were of a trivial character, and called for little action on the part of the Health Authority. The case in question was one of Typhoid Fever, the patient being one of the crew of the S.S. Trunkby, arriving from St. John's, Newfoundland, with a cargo of timber, and it affords good evidence of the necessity, in a town of this size, of an Isolation Hospital, ready for the reception of cases of this description. On the arrival of the vessel, the patient was visited and found to be in an exceedingly critical condition. He was lying in the forecastle, dark and ill-ventilated; and was being nursed by the captain and the crew, with perfect goodwill, but with an evident want of knowledge. Both he, and all on board, asked for his removal to hospital, but no hospital accommodation was available. I failed to obtain suitable lodgings for him in the neighbourhood of the Dock, and then tried to gain his

admission to the Moss Side Hospital in the Fylde, to which Institution I had, on a former occasion, sent a sailor who also was suffering from Typhoid Fever. No bed was however available, in consequence of the threatened epidemic of Typhoid Fever in an adjoining military camp, and after some delay, and a great deal of trouble, I secured his admission into the Walton-le-Dale Infectious Hospital at Bamber Bridge. Here, in spite of every attention, the case terminated fatally within a week of admission. Had a case, more or less similar, but equally urgent in character, occurred in the town, there would have been the same inability to deal with it; and this shows that, however expensive an Isolation Hospital may be, it forms a necessary adjunct to the Sanitary equipment of every large town.

In dealing with the case in question, after the patient's removal to hospital the forecastle was thoroughly disinfected, and the bedding, not only of the man himself but of the whole crew, was destroyed. Details of the work done in connection with Port inspection are given in Table No. 17.

H. O. PILKINGTON,

Medical Officer of Health.

June 29th, 1907.

TABLE No. 1.

Number and Causes of Deaths at different Ages, for the 52 weeks ending 29th December, 1906.

Cause of Death.	Under 1 Year.	1 to 5	5 to 15	15 to 25	25 to 65	65 and over.	Total.	Corresponding year, 1905.	Corresponding year, 1904.	Corresponding year, 1903.	Average for the past six years.
Small Pox	..	..	..	..	..	..	..	1	7	2	1·66
Fever	..	2	3	5	11	..	21	17	29	35	28·33
Scarlatina	..	13	2	..	..	..	15	8	8	14	28·00
Measles	35	82	5	..	..	..	122	84	87	89	77·77
Diarrhœa	186	28	..	..	2	3	219	132	141	103	154·83
Whooping Cough	6	4	1	..	..	..	11	76	30	61	48·83
Diphtheria	..	15	1	..	..	..	16	17	21	23	22·83
Croup	2	4	3	..	..	..	9	12	10	14	13·16
Consumption	..	2	9	31	78	2	122	125	124	110	124·00
Bronchitis	87	31	1	1	65	51	236	230	278	209	269·00
Inflammation of Lungs....	21	14	9	6	35	19	104	105	121	119	129·00
Teething, Premature Births and Debility	317	54	8	..	..	..	379	311	415	397	431·66
Old Age	..	..	..	..	7	79	86	88	121	110	102·33
Violence, &c.	4	8	3	4	34	8	61	75	57	64	60·66
Other Diseases	7	10	21	33	409	184	664	625	642	605	641·16
Total.....	665	267	66	80	641	346	2065	1906	2091	1955	2133·22

TABLE No. 2.

Number and Causes of Deaths in each Month of the Year ending 29th December, 1906.

Cause of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Small Pox	...	...	...	...	...	...	..	...	...	...	...	...	...
Fever	2	3	2	2	2	...	3	1	1	1	3	1	21
Scarlatina.....	...	4	1	2	...	1	1	...	2	1	1	2	15
Measles.....	39	26	18	11	8	5	2	1	...	1	4	7	122
Diarrhœa	...	...	1	2	2	1	9	15	124	53	10	2	219
Whooping Cough	...	...	...	...	...	1	1	1	2	...	2	4	11
Diphtheria	1	1	...	3	...	2	3	1	...	1	3	1	16
Croup	1	...	...	1	1	...	1	..	3	..	...	2	9
Consumption	12	8	13	7	6	13	8	14	8	12	10	11	122
Bronchitis.....	42	32	28	20	18	14	4	6	8	14	21	29	236
Inflammation of Lungs....	19	12	10	7	10	6	6	4	2	11	5	12	104
Teething Convulsions, &c.	30	33	42	26	22	32	18	29	39	37	33	38	379
Old Age	12	5	9	5	6	7	3	8	5	8	8	10	86
Violence, &c.	6	3	8	8	3	5	4	4	1	5	6	8	61
Other Diseases	57	71	58	49	49	62	44	52	58	53	53	58	664
Total.....	221	198	190	143	127	149	107	136	253	197	159	185	2065

TABLE No. 3.

Number and Causes of Deaths in each Ward for the 52 weeks ending 29th December, 1906.

Wards.	Small Pox.	Fever.	Scarlatina.	Measles.	Diarrhœa.	Whooping Cough.	Diphtheria.	Croup.	Consumption.	Bronchitis.	Inflammation of Lungs.	Teething, Premature Births, & Debility	Old Age.	Violence, &c.	Other Diseases.	Total Deaths.	Rate per 1000 per annum.	Total Births.	Rate per 1000 per annum.	Population.
St. John's Ward ..	..	3	2	16	29	2	5	1	20	22	11	40	7	4	57	219	18·64	325	27·67	11745
Avenham Ward ..	..	1	..	3	10	..	..	1	3	10	8	11	3	2	53	105	13·97	146	19·46	7502
Christ Church Wd.	..	1	..	11	19	1	..	..	17	22	8	25	5	2	42	153	17·02	258	28·71	8987
Ashton Ward ..	..	..	1	4	6	..	1	..	6	12	8	13	10	1	38	100	12·65	231	29·23	7903
Maudland Ward ..	..	2	2	8	4	4	1	..	2	13	5	21	2	5	39	108	13·50	224	28·00	7998
St. Peter's Ward..	..	2	2	14	30	1	1	2	13	28	9	35	10	4	69	220	20·05	357	32·54	10970
Moor Brook Ward	..	2	2	6	8	2	1	..	5	16	8	31	9	1	56	147	15·80	257	27·63	9300
Park Ward ..	..	2	3	10	28	..	..	1	15	33	10	70	13	3	79	267	17·65	466	30·81	15125
Trinity Ward ..	..	4	1	15	47	..	1	..	15	19	10	51	8	5	63	239	20·90	298	26·06	11435
Deepdale Ward ..	..	2	1	12	14	1	3	2	8	21	13	28	5	3	54	167	18·07	307	33·22	9240
Ribbleton Ward ..	..	1	1	13	12	..	2	2	3	23	6	32	9	1	42	147	16·84	264	30·24	8728
Fishwick Ward ..	..	1	..	10	12	..	1	..	8	17	6	16	4	3	30	108	14·46	182	24·37	7466
Gaol, Infirmary, &c.	..	..	..	..	..	..	..	..	7	..	2	6	1	27	42	85		2		
Total.....	..	21	15	122	219	11	16	9	122	236	104	379	86	61	664	2065	17·74	3317	28·49	116399

Death Rate per annum, per 1,000 of the Population for the Year 17·74
Do. Do. Do. Average for 10 years....19·10
Infantile Mortality (Deaths under one year per 1,000 Births) for the year.... 200
Do. Do. Do. Average for 10 years 207
Per centage of Deaths under one year to total Deaths for the year 32·20
Do. Do. Do. Average for 10 years..32·01

TABLE No. 4.

Number of Deaths in each Ward during each Month of 1906.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
St. John's Ward	20	21	31	9	12	7	15	11	31	22	27	13	219
Avenham Ward	12	8	8	9	6	6	6	9	11	12	5	13	105
Christ Church Ward	16	17	14	13	11	12	8	8	16	16	9	13	153
Ashton Ward	10	11	9	5	6	7	4	6	14	18	...	10	100
Maudland Ward	19	7	9	9	4	10	3	7	5	11	13	11	108
St. Peter's Ward	25	14	23	15	19	9	9	14	29	18	18	27	220
Moor Brook Ward	10	11	14	8	10	14	8	14	21	9	8	20	147
Park Ward	26	33	24	25	17	29	13	14	30	29	14	13	267
Trinity Ward	24	26	20	9	15	10	9	25	40	24	20	17	239
Deepdale Ward	24	11	13	15	11	11	9	10	16	13	19	15	167
Ribbleton Ward	20	20	12	6	6	15	10	7	20	9	7	15	147
Fishwick Ward	8	11	10	10	6	7	7	7	12	7	12	11	108
Gaol, Infirmary, &c.	7	8	3	10	4	12	6	4	8	9	7	7	85
Total	221	198	190	143	127	149	107	136	253	197	159	185	2065

TABLE No. 5.

Birth Rate, Death Rate, and Analysis of the Zymotic and Tubercular Death Rates, in 39 of the largest English Towns, for the 52 weeks ending 29th December, 1906.

Name of Town.	Estimated Population 1906.	Birth Rate.	Recorded Death Rate.	Corrected Death Rate.	ZYMOTIC DEATH RATE.								Death Rate per 1,000 from Phthisis.	Death Rate per 1,000 from other Tubercular Dis.	Deaths under one Year to 1,000 Births.
					Small Pox.	Meas-les.	Scar-let Fever.	Diph-theria.	Who'p ing Cough	Fever.	Diarr-hœa.	Total.			
London	4,721,217	26·6	15·7	—	0 00	0·40	0·11	0·14	0·26	0·05	0 95	1·91	1·47	0·55	132
Croydon	151,011	25 7	13·8	13·4	0·00	0·25	0·05	0 26	0·18	0 03	1·35	2·12	1·14	0·40	125
West Ham	301,617	30·5	12·3	15·3	0·00	0·40	0·12	0·29	0·23	0·17	1 91	3·12	1·14	0·66	149
Brighton	128,095	22·3	14·7	14·4	0·00	0·22	0·02	0·10	0·17	0·02	0·55	1·08	1·42	0·58	111
Portsmouth	205,118	28·6	15·0	14·8	0 00	0 04	0·01	0·29	0 31	0 08	1·10	1·83	1·00	0·33	130
Norwich	117,958	26·0	17 9	16·7	0·00	0 83	0·09	0 22	0·16	0·09	1·40	2·79	1·64	0 79	176
Plymouth.....	118,014	23·9	16·4	15·9	0·00	0·45	0·09	0·18	0·46	0 05	0·70	1·93	1·33	0 50	154
Bristol	363,223	25·8	14·6	14·3	0·00	0·38	0 07	0·22	0·28	0 05	0 58	1·58	1·11	0·37	128
Wolverhampton	100,867	27·4	14·5	14·7	0·00	0 27	0·16	0·22	0·19	0 07	1·28	2·19	0·79	0·46	140
Birmingham.....	548,022	29·2	16·5	16·7	0·00	0·41	0·10	0·16	0·46	0 07	1·56	2·76	1·22	0 38	168
Leicester	232,111	25 3	13·4	14·4	0·00	0·34	0·22	0·11	0·48	0·06	1 11	2·32	1·46	0·39	166
Nottingham	254,567	26·5	16·6	16·0	0·00	0·01	0·06	0·15	0·15	0·16	1·48	2·01	1·23	0·38	171
Derby	123,981	25 0	14 7	14 0	0·00	0·01	0·03	0 51	0·23	0·08	0·63	1·49	0 91	0·45	114
Birkenhead	117,292	31·8	17·3	—	0 00	0 07	0·26	0·23	0·50	0 14	1·76	2·97	—	—	152
Liverpool.....	739,180	32·6	21·3	20·3	0·00	0·77	0·25	0·20	0 48	0·10	1·87	3 67	1·58	0·50	171
Bolton	180,502	25·5	14·1	15·5	0·00	0 01	0·09	0 13	0·11	0·22	1·15	1·71	1·11	0·55	138
Manchester	637,520	29 0	19·0	—	0 00	0·74	0·17	0 20	0 30	0 13	1·52	3·06	1·71	0·63	166
Salford.....	234,077	30·2	18·2	—	0 00	0 80	0 19	0·38	0·23	0·17	1·44	3·21	—	—	160
Oldham	140,969	26·9	19 8	18·8	0 00	0·90	0·23	0·12	0·29	0·04	1·20	2·78	1·34	—	146
Burnley	102,914	27·6	20·8	19·7	0 00	1·13	0 11	0·11	0·26	0·10	2·48	4·19	1·36	0·53	213
Blackburn	133,583	25·6	16·9	16·4	0·00	0·47	0 24	0·19	0·12	0 11	1·28	2·41	0·92	0 58	156
Preston	**116,399**	**28·5**	**17·7**	**19·2**	**0·00**	**1·04**	**0·13**	**0·14**	**0 09**	**0·18**	**1·61**	**3·19**	**1·04**	**0·86**	**200**
Huddersfield ...	94,862	24·2	17·8	17·3	0·00	0 63	0·06	0 13	0·33	0 09	0·72	1·96	1·25	0·40	135
Halifax	108,000	19·2	16·1	15·5	0·00	0·49	0·05	0·38	0·05	0 03	0·28	1·28	1·12	0·39	118
Bradford	288,544	20 6	16·0	16·1	0·00	0·44	0·15	0·21	0·13	0·18	0·92	2·03	1·30	0·41	152
Leeds	463,495	26 1	16·0	15·8	0 00	0·60	0·07	0·16	0 32	0 11	0·97	2·23	1·23	0·66	152
Sheffield	447,951	29·9	16·7	16·7	0 00	0·17	0·51	0·18	0·24	0·11	1·75	2·96	I 01	0·46	158
Hull	262,426	29 6	16 9	17·0	0 03	0·25	0 03	0·51	0·28	0 19	1·55	2·84	1·09	0 46	161
Sunderland	154,251	34·8	18·5	18·5	0·00	0·10	0·02	0·23	0·36	0·13	1·12	1·96	1·52	0 62	140
Gateshead	123,191	31·9	16·3	—	0 00	0·41	0 06	0 28	0·33	0 08	1·62	2·77	—	—	162
Newcastle	268,721	30 6	17·1	—	0·00	0·63	0 05	0 24	0 22	0·04	1·03	2 21	—	—	151
Cardiff	183,823	27·2	13 9	14 2	0 00	0 01	0·01	0·07	0 35	0·07	0·82	1·33	1·24	0·52	135
Swansea	100,690	31·9	18·1	17·9	0·00	0·27	0·00	0 07	0·50	0 09	0·82	1·75	1·47	0·64	156
Warrington	69,816	32·2	18·7	18·1	0·00	0 47	0 02	0·12	0·47	0·07	2·10	3·25	1 55	0 68	157
St. Helen's	91,153	33·9	16·7	17·2	0·00	0·10	0·04	0·26	0 05	0·21	1·32	1·98	1·21	0 84	157
Stockport	99,646	26·9	19·7	19·4	0·00	0·70	0·03	0·08	0·35	0·09	1·77	3·02	1·25	0·60	186
Middlesborough	100,069	35·9	20·7	20·7	0·00	0·11	0·11	0·28	0·38	0·15	1·50	2·80	1·10	0·53	176
South Shields ...	111,402	31 7	15·7	17·8	0·00	0 97	0·05	0·27	0·35	0·08	1·14	2·86	1·48	0·68	150
Northampton ...	91,640	21·7	12·1	11·6	0·00	—	0 05	0 07	0·08	0·10	0·60	0·92	0 87	0·33	121

TABLE IA.

Vital Statistics of Whole District during 1906 and Previous Years.

Year.	Population estimated to Middle of each Year.	Births.		Deaths under 1 Year of Age.		Deaths at all Ages. Total.		Total Deaths in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District. (Workhouse).	Deaths at all Ages. Nett.	
		Number	Rate*	Number	Rate per 1,000 Births registered	Number	Rate*			Number	Rate*
1896	113,864	3673	32·25	760	204	2191	19·24	58	151	2342	20·56
1897	115,103	3687	32·03	954	263	2687	23·34	63	166	2853	24·78
1898	116,356	3559	30·58	812	221	2107	18·10	81	138	2245	19·29
1899	117,622	3492	29·68	889	255	2492	21·18	85	181	2673	22·72
1900	118,902	3410	28·67	814	236	2636	22·16	66	200	2836	23·85
1901	113,117	3418	30·21	737	218	2213	19·56	75	149	2362	20 88
1902	113,766	3278	28·81	618	188	1998	17·56	61	144	2142	18·82
1903	114,404	3453	30·18	541	156	1955	17·08	66	135	2090	18·26
1904	115,055	3314	28·26	609	183	2091	17·83	79	149	2240	19·10
1905	115,721	3259	28·16	490	150	1906	16·47	90	169	2075	17·93
Averages for years 1896-1905	115,391	3454	29·88	722	207	2227	19·25	72	158	2385	20·61
1906	116,399	3317	28·49	665	200	2065	17·74	85	170	2235	19 20

* Rates calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water) 3,721.

Total population at all ages..... 112,982
Number of inhabited Houses 24,194
Average number of persons per house... 4·66
} At Census of 1901.

TABLE 2A.

Vital Statistics of separate Localities in 1906 and previous years.

Localities.	1901				1902				1903				1904				1905				1906			
	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year	Births registered	Deaths at all ages.	Deaths under 1 year.
St. John's Ward ...	11409	378	212	65	11495	354	217	71	11555	373	193	59	11630	346	232	64	11685	314	211	62	11745	325	219	73
Avenham Ward	7363	132	110	22	7394	101	82	13	7422	135	91	16	7462	141	116	14	7482	141	107	19	7502	146	105	44
Christ Church Ward	8753	254	159	48	8787	239	147	42	8837	269	137	48	8887	271	123	48	8927	242	137	35	8987	258	153	25
Ashton Ward	7688	210	98	33	7728	205	109	26	7758	231	110	32	7798	235	135	39	7838	220	108	21	7903	231	100	20
Maudland Ward ...	7783	213	130	50	7823	233	138	44	7873	227	125	38	7908	224	146	49	7948	231	123	39	7998	224	108	31
St. Peter's Ward ...	10597	352	213	67	10655	324	176	61	10735	383	201	63	10820	346	180	64	10900	372	192	65	10970	357	220	82
Moor Brook Ward...	9080	315	183	78	9119	264	138	47	9167	258	153	42	9201	239	156	44	9250	241	120	33	9300	257	147	46
Park Ward..... ...	14592	492	290	124	14701	482	265	91	14791	490	280	81	14880	447	271	80	15030	456	247	76	15125	466	267	104
Trinity Ward	11098	338	243	66	11185	319	249	83	11267	318	202	50	11330	323	218	71	11400	304	209	46	11435	298	239	97
Deepdale Ward	8986	272	156	62	9020	284	149	51	9060	281	129	30	9120	301	187	55	9170	280	151	39	9240	307	167	56
Ribbleton Ward.....	8506	266	201	68	8547	248	144	54	8597	275	159	56	8630	212	139	37	8670	247	111	27	8728	264	147	54
Fishwick Ward	7262	195	143	50	7302	196	123	35	7324	212	109	24	7380	227	109	39	7421	208	100	28	7466	182	108	33
Public Institutions...	...	1	75	5	...	5	61	4	...	1	66	2	...	2	79	5	...	3	90	...	...	2	85	...

TABLE 3A.

Cases of Infectious Disease notified during the Year 1906.

Notifiable Disease.	Cases Notified in whole District.							Total Cases Notified in each Locality.													
	At all ages.	At Ages—Years.						St. John's Ward.	Avenham Ward	Christ Church Ward.	Ashton Ward.	Maudland Ward.	St. Peter's Ward.	Moor Brook Ward.	Park Ward.	Trinity Ward.	Deepdale Ward	Ribbleton Ward	Fishwick Ward.	Gaol, Infirmary, &c.	Removed to Hospital.
		Under 1 Year.	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards														
Small Pox	3	...	...	...	3	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	3
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	68	...	36	17	6	9	...	8	5	4	8	6	1	9	3	6	10	6	2	...	...
Membranous Croup ...	2	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...
Erysipelas	69	3	3	3	8	48	4	7	10	2	5	4	4	5	9	5	4	5	7	2	...
Scarlet Fever	470	4	200	244	15	6	1	38	26	35	35	29	52	37	80	54	22	42	19	1	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	151	...	22	62	25	42	...	15	10	6	7	15	14	9	21	26	14	9	5	...	...
Relapsing Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	5	...	1	4	...	...	...	...	...	...	...	...	...	3	1	...	...	1	...	...	...
Puerperal Fever ...	4	...	...	...	...	4	...	1	...	...	1	...	...	...	1	1	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	772	7	264	330	57	109	5	69	51	47	57	55	72	64	115	92	50	63	34	3	3

TABLE 4A.

Causes of, and Ages at, Death during the Year 1906.

Causes of Death.	Deaths at the subjoined ages, whether occurring in or beyond the District.							Deaths in Localities at all ages.												Deaths in Public Institutions.	Deaths in Workhouse.
	All Ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	St. John's Ward.	Avenham Ward.	Christ Church Ward	Ashton Ward.	Maudland Ward.	St. Peter's Ward.	Moorbrook Ward.	Park Ward.	Trinity Ward.	Deepdale Ward.	Ribbleton Ward.	Fishwick Ward.		
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	122	35	82	4	1	...	...	16	3	11	4	8	14	6	10	15	12	13	10	...	...
Scarlet Fever	15	...	13	2	...	...	...	2	...	...	1	2	2	2	3	1	1	1	...	...	...
Whooping Cough	11	6	4	1	...	...	...	2	...	1	...	4	1	2	...	...	1	...	...	...	...
Diphtheria and Membranous Croup	16	...	15	1	...	...	...	5	...	...	1	1	1	1	...	1	3	2	1	...	...
Croup	9	2	4	3	...	...	...	1	1	...	...	...	2	...	1	...	2	2	...	...	...
Fever (Typhus)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever (Enteric)	21	...	2	3	5	11	...	3	1	1	...	2	2	2	2	4	2	1	1	...	...
Fever (Other continued)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	23	...	...	1	1	15	6	3	1	5	1	2	...	3	5	2	...	1	..	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	219	186	27	...	...	2	4	29	9	19	6	4	30	8	28	47	14	12	12	...	1
Enteritis	9	...	7	1	...	...	1	4	2	1	1	...	...	...	...	1	...	...	...	...	...
Puerperal Fever	2	...	...	...	...	2	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
Erysipelas	4	1	...	...	...	2	1	...	1	...	...	...	1	...	...	...	1	...	...	...	1
Other Septic Diseases	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Phthisis	144	1	1	7	32	101	2	20	2	17	6	2	12	5	15	15	8	3	8	7	24
Other Tubercular Diseases	54	23	12	8	6	5	...	6	5	3	2	3	5	4	15	3	5	...	1	2	...
Cancer, Malignant Disease	92	...	...	...	...	57	35	6	6	3	3	4	13	5	12	14	7	3	3	6	7
Bronchitis	249	86	35	...	1	68	59	22	10	22	12	13	28	16	33	19	21	23	16	...	14
Pneumonia	114	21	14	8	6	43	22	10	8	8	8	5	9	8	10	10	13	6	6	2	11
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Respiratory Organs	5	...	...	...	..	4	1	1	...	...	...	...	1	...	...	...	1	...	...	...	2
Alcoholism / Cirrhosis of Liver	16	...	...	...	...	16	...	1	3	...	...	...	2	1	1	3	...	...	2	...	3
Venereal Diseases	7	1	1	...	1	4	...	1	...	1	...	...	...	...	...	1	...	1	...	2	1
Premature Birth	110	110	...	...	...	...	...	13	3	6	3	4	10	6	16	17	10	17	5	...	...
Diseases and accidents of Parturition	13	...	...	...	...	13	...	...	...	1	1	...	1	2	...	2	2	2	2	...	...
Heart Diseases	194	1	...	4	10	104	75	11	17	13	10	12	13	17	20	18	13	14	10	5	21
Accidents	48	4	8	3	3	23	7	2	2	2	1	3	4	1	2	4	2	2	1	21	1
Suicides	15	...	...	...	1	11	3	2	...	...	...	2	...	...	1	1	1	...	2	6	...
Old Age	115	...	...	...	..	9	106	7	3	5	10	3	10	9	13	8	5	9	4	1	28
All other causes	607	186	50	15	16	225	115	48	28	35	29	34	58	49	80	53	43	36	24	33	56
All causes	2235	663	275	61	84	715	437	215	106	154	100	109	219	147	267	239	168	148	108	85	170

TABLE 5A.

Deaths from stated Causes in Weeks and Months under One Year of Age during the Year 1906.

Cause of Death.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes :—																	
Certified.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Common Infectious Diseases :—																	
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	1	...	1	...	...	...	1	2	2	9	4	7	6	3	35
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria : Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	2	...	...	2	...	1	...	1	6
Diarrhœal Diseases :—																	
Diarrhœa, all forms	..	3	6	...	9	16	19	20	22	26	18	13	13	13	8	9	186
Enteritis, Muco-enteritis, Gastro-enteritis	1	...	...	...	1	...	3	...	2	5	...	...	...	1	...	...	12
Gastritis, Gastro-intestinal Catarrh...	...	...	...	...	...	..	1	...	...	...	...	...	...	...	...	...	1
Wasting Diseases :—																	
Premature Birth...	69	7	11	4	91	10	3	1	...	...	...	...	...	...	...	...	105
Congenital Defects	22	1	3	...	26	5	6	1	2	..	...	...	...	1	...	...	41
Injury at Birth	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
Want of Breast Milk, Starvation.....	...	1	...	...	1	1	...	1	...	...	...	...	...	...	1	...	4
Atrophy, Debility, Marasmus	9	8	4	...	21	17	8	8	4	10	6	3	2	3	5	2	89
Tuberculous Diseases :—																	
Tuberculous Meningitis	...	...	...	...	...	1	...	...	...	1	1	2	...	...	...	1	6
Tuberculous Peritonitis : Tabes Mesenterica	...	...	...	...	...	...	...	2	1	1	1	1	...	...	2	...	8
Other Tuberculous Diseases ...	...	...	...	...	...	...	...	...	2	...	1	...	1	...	...	...	4
Erysipelas	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Syphilis	...	...	...	...	...	..	1	...	...	...	...	...	..	...	...	...	1
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (*not Tuberculous*)	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Convulsions	8	1	...	...	9	3	2	3	1	3	2	2	2	3	2	...	32
Bronchitis	1	1	...	2	4	8	8	6	7	8	9	11	6	9	7	4	87
Laryngitis	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	2
Pneumonia	1	...	...	...	1	...	2	1	4	3	2	2	2	1	3	...	21
Suffocation, overlying	...	...	1	...	1	...	1	1	1	...	...	...	...	...	...	...	4
Other Causes	2	1	2	...	5	...	...	3	1	2	2	2	...	3	1	...	19
Total	113	23	28	6	170	62	54	49	50	61	44	47	30	42	36	20	665

Births in the year, legitimate	3,149	Population, estimated to middle of 1906	116,399
„ illegitimate	168	Deaths in the year of legitimate infants	581
Deaths from all Causes at all ages	2,065	„ illegitimate infants	84

TABLE No. 6.

The estimated Population, Number of Births and Deaths, Rates per thousand, and natural increase in the Borough, for each year since 1841.

Years.	Estimated Population.	No. of Deaths.	Death Rate per 1000.	No. of Births.	Birth Rate per 1000.	Natural Increase.
1841	51.000	1508	29 57	1974	38·70	466
1842	52,840	1550	29·33	1944	36·79	394
1843	54,680	1459	26·38	1975	36·12	516
1844	56,520	1380	24·42	2200	38·92	820
1845	58,360	1635	28·01	2293	39·29	558
1846	60,200	2189	36·36	2475	41·09	286
1847	62,050	2059	33·18	2268	36·59	209
1848	63.900	1550	24·26	2223	34·79	673
1849	65,750	1751	26·63	2403	36·55	652
1850	67,000	1745	25·81	2649	39·19	904
1851	69,450	2241	32·26	2803	40·36	562
1852	70,850	2284	32·23	2998	42·31	714
1853	72,250	2346	32·47	3072	42·51	726
1854	73,600	2013	27·35	3037	41·26	1024
1855	75,000	2557	34·10	3071	40·95	514
1856	76,400	2251	29·46	3151	41·24	900
1857	77,800	2131	27·39	3286	42·24	1155
1858	79,200	2545	32·13	3082	38·91	537
1859	80,600	2111	26·19	3399	42·17	1288
1860	82 000	2236	27·27	3381	41·23	1145
1861	82,985	2585	31·15	3626	43·69	1041
1862	83,231	2411	28·97	3522	42·32	1111
1863	83,477	2142	25·66	3388	40·57	1246
1864	83,686	2432	29·06	3422	40·89	990
1865	83,932	2708	32·26	3338	39·77	630
1866	84,178	2854	33·90	3535	41·99	681
1867	84,424	2608	30·89	3732	44·20	1124
1868	84,670	2798	33·04	3710	43·82	912
1869	84,916	2248	26·47	3434	40·44	1186
1870	85,162	2406	28·25	3486	40·93	1080
1871	85,427	2541	29·75	3438	40·24	897
1872	85,654	2294	26·78	3704	43·24	1410
1873	86,000	2899	33·71	3558	41·37	659
1874	86,000	2962	34·44	3582	41·65	620
1875	86,000	2581	30·01	3499	40·68	918
1876	86,600	2331	26·92	3623	41·84	1292
1877	87,000	2336	26·85	3601	41·39	1265
1878	87,300	2502	28·66	3697	42·35	1195
1879	87,600	2395	27·34	3403	38·83	1068
1880	88,000	2425	27·35	3475	39·49	1050
1881	96,524	2014	21·17	3489	36·14	1445
1882	97,656	2511	25·71	3785	38·76	1214
1883	98,564	2345	23·79	3576	36·28	1231
1884	99,481	2540	25·53	3745	37·64	1205
1885	100,406	2563	25·52	3868	38·52	1305
1886	101,340	2769	27·32	3961	39·08	1192
1887	102,283	2703	26·42	3870	37·83	1167
1888	103,234	2326	22·53	3823	37·03	1497
1889	104,194	3019	28·97	3912	37·63	902
1890	105,163	2726	25·92	3718	35 35	992
1891	107,864	2807	26·02	3830	35·50	1023
1892	109,038	2481	22·75	3686	33·80	1205
1893	110,225	2753	24·97	3809	34·55	1056
1894	111,425	2186	19·61	3545	31·81	1359
1895	112,638	2528	22·44	3702	32·95	1174
1896	113.864	2191	19·24	3673	32·25	1482
1897	115.103	2687	23·34	3687	32·03	1000
1898	116,356	2107	18·10	3559	30·58	1452
1899	117,622	2492	21·18	3492	29·68	1000
1900	118,902	2636	22·16	3410	28 67	774
1901	113,117	2213	19·56	3418	30·21	1205
1902	113.766	1998	17·56	3278	28·81	1280
1903	114,404	1955	17·08	3453	30·18	1498
1904	115,055	2091	17·83	3314	28·26	1223
1905	115,721	1906	16·47	3259	28·16	1353
1906	116,399	2065	17·74	3317	28·49	1252

TABLE No. 7.

Per Centage of Deaths from Zymotic Diseases to Sickness reported during the Year ending December 31st, 1906.

Disease.	No. of Cases Reported.	No. of Deaths.	Per Centage.
Small Pox	3	...	...
Typhoid Fever	151	21	13·91
Scarlet Fever	470	15	3·19
Diphtheria	68	16	23 53
Puerperal Fever	4	2	50·00
Erysipelas	69	3	4·35

TABLE No. 8.

Meteorological Observations for the Year ending 29th December, 1906.

Month.	Attached Thermometer.	Barometer.	Barometer corrected to 32 deg. Fahr.	Hygrometer		Temperature in Shade.		Earth Thermometer		Mean Daily Temperature.	Humidity Saturation=100	Temperature of Town's Water.	Rainfall in inches.	Number of Deaths from	
				Dry Bulb.	Wet Bulb.	Maximum	Minimum.	One Foot.	Four Feet.					Bronchitis.	Diarrhœa.
January	41·0	29·771	29·883	41·7	40·6	44·6	38·0	..	..	41 3	92	39·9	4·59	42	..
February ..	36·2	29·603	29·729	37·1	36 0	41·9	32·7	..	..	37·3	89	38·6	3·23	32	..
March.....	40·6	29·885	29·999	42·2	39·9	46·7	35·9	..	..	41·3	81	43·3	2·56	28	1
April	44·8	30·051	30·150	47·0	42·8	53·3	38·6	..	..	45·9	72	46·0	1·32	20	2
May	51·1	29·723	29·804	51·5	48·5	55·6	45·3	48·4	46·5	50·4	80	49·9	4·99	18	2
June	60·0	30·109	30·163	60·7	55·8	66·5	52·3	54·6	51·5	59·5	73	59·6	1·08	14	1
July.....	60·5	29·971	30·023	61·0	56·4	65·7	53·3	56·0	54·3	59·5	74	61·0	1·73	4	9
August	62·1	29·891	29·936	63·1	59·3	68·7	56·2	58·1	56·5	62·4	79	62·0	3·86	6	15
September ..	55·6	30·153	30·215	57·2	53·9	62'7	50·7	54·9	56·2	56·6	78	59·4	1·61	8	124
October	50·5	29·673	29·754	51·5	49·7	55·5	46·7	50·3	52·7	51·1	88	52·5	6·59	14	53
November ..	45·1	29·830	29·928	45·7	44·2	49·2	41·1	45·0	48·2	45·1	87	45·4	3·12	21	10
December ..	38·4	29·859	29·977	40·0	38·8	42·4	34·9	40·3	45·6	38·6	89	41·3	3·13	29	2

TABLE No. 9.

Summary of Work done during the Year 1906.

	No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Number of Complaints received	554	743	236	678	2,211
Inspections of Dwelling Houses	4151	3247	3160	4538	15,096
,, Infected Houses	198	979	196	296	1,669
,, Lodging Houses	125	1591	128	3425	4,269
,, Cellars	35	...	114	219	368
,, Canal Boats	...	...	...	111	111
,, Vans and Tents	3	122	61	272	458
,, Schools	20	6	16	137	179
,, Cowsheds, Dairies and Milkshops	232	8	167	225	632
,, Slaughter Houses	63	11	80	11	165
,, Markets	...	136	40	622	798
,, Ashpits and Yards	3177	1041	3201	2934	10,353
,, Drains	4190	3819	3236	3222	14,467
Re-Inspections	3722	4925	2201	670	11,518
Smoke Observations	26	26	24	22	98
Circular Letters sent	161	...	26	94	281
Notices served for Defective Slopstone Pipes	85	42	47	10	184
,, ,, Drains	130	153	146	249	678
,, ,, Spouts	37	75	38	100	250
,, ,, Water Closets	85	106	119	105	415
,, ,, Privies and Ashpits	...	3	...	...	3
,, ,, Yard Pavement	87	33	6	5	131
,, Overcrowding	6	...	...	5	11
,, Limewashing	51	41	79	63	234
,, Manure Accumulations	4	11	6	1	22
,, Stagnant Water	1	...	4	...	5
,, General Nuisances	83	73	41	90	287
Notices served to Sewer, Level, Pave, &c.	375	152	395	...	922
,, Flag Yards	335	368	120	136	959
,, Convert Privies into W.C's.	446	481	9	3	939
,, Fill up Ashpits	17	...	...	6	23
,, Supply Ashpail	55	...	6	21	82
House Drains Tested	86	96	39	42	263
School Drains Tested	...	2	...	7	9
Number of Houses Disinfected	214	284	210	229	937
Number of Schools ,,	10	11	35	27	83
Parcels of Bedding ,,	21	129	45	25	220
Number of Animals removed	82	56	45	103	286
,, Ashpails cleansed	...	...	...	...	1,554,158
,, Ashpits cleansed	...	...	...	...	5,210
Fish Condemned and Destroyed	...	...	Shell 130 lbs. Wet 21394 ,, Dry 450 ,,		21,974 lbs.
Butcher's Offal Condemned and Destroyed	...	200 lbs.	...	112 ,,	312 lbs.
Fruit ,, ,,	...	...	...	65 ,,	65 ,,
Tinned and Packet Foods ,, ,,	40 lbs.	...	...	...	40 ,,
Yeast ,, ,,	...	...	...	28 ,,	28 ,,

TABLE No. 6A.

Factories, Workshops, Laundries, Workplaces, and Homework.

1.—INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	326	...	...
Workshops (including Workshop Laundries)	2098	6	...
Workplaces (Other than Outworkers' premises included in Part 3 of this Report)	131	1	1
Total	2555	7	1

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts:—				
Want of Cleanliness	17	17		
Want of ventilation	5	4		
Overcrowding	...	...		
Want of drainage of floors	4	4		
Other Nuisances	55	52	...	1
Sanitary accommodation — insufficient ...	27	27		
Sanitary accommodation — unsuitable or defective	88	87		
Sanitary accommodation — not separate for sexes	3	2		
Offences under the Factory and Workshop Act:—				
Illegal occupation of underground bakehouse (s. 101)...	1	1		
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	...	...		
Other offences (Excluding offences relating to outwork which are included in Part 3 of this Report)	...	...		
Total	200	194	...	1

3.—HOMEWORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.								Number of Inspections of Outworkers' premises.	OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.				Numbers of Addresses of Outworkers received from other Councils.	Numbers of Addresses of Outworkers forwarded to other Councils.	Prosecution.			Instances.	Notices served.	Prosecutions	Instances.	Orders made. (sec. 110).	Prosecutions (Sections 109, 110.)
	Twice in the Year.		Once in the Year.				Failing to keep or permit inspection of lists.	Failing to send lists.							
	Lists.	Outworkers	Lists.	Outworkers											
Wearing Apparel :—															
(1) making, &c. ...	58	96	8	18	1	1	...	..	95	...	...	...	...	...	...
(2) cleaning and washing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL ..	58	96	8	18	1	1	...	...	95	...	...	...	...	...	...

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Factories	114
Workshops	733
Retail Bakehouses	105
Public Bakehouses	23
Total number of workshops on Register ...	975

5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ...	7
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act, (s. 5.) — Notified by H.M. Inspectors	30
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act, (s. 5.) — Reports (of action taken) sent to H.M. Inspector	30
Other	37
Underground Bakehouses (s. 101) :—	
Certificates granted during the year	...
In use at the end of the year	3

TABLE No. 10.

Summary of Work done under the Factory and Workshops Act during the Year 1906.

	No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Number of Factories and Workshops on Register	171	331	135	338	975
,, Circular Letters sent re Out-workers ...	...	44	4	59	107
,, Out-workers reported	6	76	4	33	119
Visits to Factories and Workshops	384	641	317	413	1755
,, Retail Bakehouses	101	275	72	100	548
,, Public Bakehouse	110	24	46	72	252
,, Home-workers premises	6	15	18	56	95
Drains tested	...	...	...	2	2
Defects found and Remedied:—					
Defective Waste Pipes	...	...	...	4	4
,, Urinals	2	...	...	1	3
,, Drains	4	2	...	6	12
,, Spouts and Roofs	1	...	...	2	3
,, Water Closets	18	24	26	7	75
Privies converted into W.C's.	...	...	...	11	11
Limewashing required.....	3	8	4	2	17
General Nuisances	5	13	4	12	34
Insufficient Ventilation	3	...	...	2	5
Defective Floors	...	...	...	2	2
Insufficient W.C. accommodation for Females	8	3	2	6	19
,, ,, Males	...	2	1	6	9
No Receptacle for Refuse	1	...	...	...	1
Manure Accumulations	1	...	...	3	4
No Abstract of Workshops Act in Workroom.....	...	2	2	3	7
Illegal Occupation of Cellar Bakehouse	...	...	...	1	1

TABLE No. 11.

List of Factories and Workshops on Register during the Year 1906.

	No 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Bakers and Confectioners (Retail)	24	33	16	32	105
Bakers (Public)	8	5	4	6	23
Basket Makers	1	2	2	1	6
Beer Bottlers	3	2	...	4	9
Biscuit Makers	...	4	1	...	5
Boot, Shoe, and Clog Makers, Leather Curriers	21	48	22	30	121
Brassfounders	1	2	1	...	4
Breweries	1	4	...	3	8
Brush Makers	1	1	...	2	4
Cabinet Makers, Wood Carvers, Upholsterers	4	5	3	14	26
Coach Builders	1	5	1	4	11
Cotton Waste Cleaners	...	1	...	...	1
Cotton Manufacturers	22	14	19	8	63
Coopers	1	3	1	...	5
Cycle Makers and Enamellers	3	11	3	7	24
Engravers	...	...	...	6	6
French Polishers	1	2	...	2	5
Ironfounders	4	5	5	3	17
Joiners, Builders, Wheelwrights, Wood Turners	12	14	5	10	41
Laundry	...	...	1	...	1
Marine Store Dealers	...	4	...	2	6
Milliners, Dressmakers, Underclothing Manufacturers	24	65	20	46	155
Picture Framers, Mount Cutters, Gilders	1	4	2	6	13
Photographers	2	3	2	2	9
Plumbers, Painters	10	12	4	17	43
Printers, Bookbinders	...	1	...	18	19
Restaurant Keepers	2	3	...	3	8
Rope and Twine Makers	1	...	2	...	3
Saddlers	1	6	1	4	12
Smiths, Black and White and Tinplate	4	6	5	24	39
Stone and Marble Masons	4	4	1	3	12
Sugar Boilers	2	1	...	...	3
Tailors	6	29	8	43	86
Watch Makers and Jewellers	1	11	3	10	25
Wire Workers	...	1	...	1	2
Offensive Trades — Fell Mongers	...	...	...	1	1
Offensive Trades — Soap Boilers	...	...	1	3	4
Offensive Trades — Fat and Tallow Melters	...	4	...	3	7
Offensive Trades — Tripe Boilers	1	2	...	1	4
Offensive Trades — Knacker Yards	1	...	...	...	1
Offensive Trades — Gut Scrapers	...	4	...	...	4
Various	2	10	3	19	34

TABLE No. 12

HEALTH VISITORS.

Summary of Work done during the Year 1906.

			Districts.		Total.
			A.	B.	
Visits, Births.	Number of Houses visited		1685	1300	2985
	,, ,, Found Clean		1459	1087	2546
	,, ,, ,, Dirty		126	213	339
	Children. Breast Fed		1103	745	1848
	Children. Partially Breast Fed		204	284	488
	Children. Artificially Fed		378	271	649
	Occupation of Mother. Home Permanently		1050	716	1766
	Occupation of Mother. Home Temporarily		601	303	904
	Occupation of Mother. Home and Work		34	92	126
	Occupation of Mother. At Work when visited	...	186	189	375
Visits, Measles Deaths.	Number of Houses visited		26	91	117
	,, ,, Found Clean		24	68	92
	,, ,, ,, Dirty		2	23	25
Visits, Diarrhœa Deaths.	Number of Houses visited		86	100	186
	,, ,, Found Clean		70	74	144
	,, ,, ,, Dirty		16	26	42
	Children. Breast Fed		9	9	18
	Children. Partially Breast Fed		9	12	21
	Children. Artificially Fed		68	79	147
Visits, House to House.	Number of Houses visited		54	126	180
	,, ,, Found Clean		5	41	46
	,, ,, ,, Dirty		49	85	134
	Visits—Minor Infectious Diseases amongst School Children	...	903	1404	2307
	Number of Re-visits		1026	1139	2165
	,, Tube Bottles in use		221	...	221
	,, Cards Distributed		1685	1300	2985
	,, Visits to Midwives		32	...	32

TABLE No. 13.

Return of Work done by Inspector of Food and Drugs, &c., during the year 1906.

Food and Drugs, Samples purchased	326
Cow-sheds and Dairies visited	162
Slaughter-houses visited	4230
Meat Condemned and Destroyed	94,078 lbs.

TABLE No. 14.

Contagious Diseases (Animals) Act, 1878.

Name of Disease.	Situation of Premises.	Date of Outbreak.	Number of Diseased Animals.	Number of Healthy Animals.	Slaughtered by Owner.	Slaughtered by Order of Board of Agriculture.	Number of Visits.
NO CASES DURING 1906.							

TABLE No. 15.

Substances submitted for Analysis during the Year, 1906.

Name of Article.	No. of Samples.	Result.
Beer	4	Genuine
Bread	2	Do.
Butter	76	Do.
Camphorated Oil ...	3	Do.
Cheese	3	Do.
Coffee	21	Do.
Compound Liqu'rice Powder.....	12	Do.
Lard	12	Do.
Milk	52	Do.
Pepper (White) ...	13	Do.
Rum (Jamaica).....	1	Do.
Sweets (Mixed) ...	9	Do.
Tincture of Turkey Rhubarb	2	Do.
Vinegar (Malt).....	1	Do.
Whiskey	7	Do.
Wine (Port).....	3	Do.
	221	
Coffee	1	Contained upwards of 5 per cent. of Chicory. Vendor cautioned by Town Clerk.
„	1	Contained upwards of 15 per cent. of Chicory. Vendor cautioned by Town Clerk.
„	1	Contained 65 per cent. of Chicory. Vendor cautioned by Town Clerk.
Margarine	1	Not labelled. Vendor cautioned by Town Clerk.
Milk	1	2 30 per cent. fat, 8·97 per cent. other solids, =11·27 per cent. total solids. Vendor summoned and fined 20/- and costs

TABLE No. 15.—Continued.

Name of Article.	No. of Samples.	Result.
Milk	1	2·41 per cent. fat, 6·25 per cent. other solids,=8·66 total solids ; 36 per cent. added water. Vendor summoned, and fined 10/- and costs.
,, ...	1	2·61 per cent. fat, 7·97 per cent. other solids,=10 58 total solids ; 6 per cent. added water. Vendor cautioned by Town Clerk.
,, ...	1	2·61 per cent. fat, 8·29 per cent other solids, =10·90 total solids. Vendor cautioned by Town Clerk.
,, ...	1	2·83 per cent. fat, 9·22 per cent other solids,=12·05 total solids. Vendor cautioned by Town Clerk.
,, ...	1	2·78 per cent. fat, 9·53 per cent. other solids,=12·32 per cent. total solids. Vendor cautioned by Town Clerk.
,, ...	1	2·87 per cent. fat, 7·49 per cent. other solids,=10·36 per cent. total solids ; 13 per cent. added water. Vendor summoned, and fined 20/- and costs.
,, ...	1	3·18 per cent. fat, 7·16 per cent. other solids,=10·34 per cent. total solids ; 18 per cent. added water. Vendor summoned, and ordered to pay costs.
,, ...	1	4·07 per cent. fat, 7·91 per cent. other solids,=11·98 per cent. total solids ; 7 per cent. added water. Vendor cautioned by Town Clerk.
,, ...	1	Contained 1·8 grains of Borates, calculated as Boracic Acid, per pint. Vendor cautioned by Town Clerk.
Whiskey	1	30·3 degrees under proof, which is 5·3 degrees below the statutory limit. Vendor summoned, and fined 20/- and costs.
,, ...	1	30·1 degrees under proof, which is 5·1 degrees below the statutory limit. Vendor cautioned by Town Clerk.
,, ...	18	Consisted almost entirely of patent still spirit.

TABLE No. 16.

Substances informally purchased, and submitted for Analysis, during the Year 1906.

Name of Article.	No. of Samples.	Result.
Butter	26	Genuine.
Camphorated Oil ...	1	Do.
Coffee	8	Do.
C'mpound Liquorice Powder	1	D o
Cream	1	Do.
Ginger (Ground) ...	1	Do.
Lard	1	Do.
Milk	19	Do.
Rabbit (Canned) ...	1	Do.
Milk	1	2·20 per cent. fat, 8·75 per cent. other solids, =10·95 per cent. total solids.
,, ...	1	2·70 per cent. fat, 9·07 per cent. other solids,=11·77 per cent. total solids.
,, ...	1	2·90 per cent fat. 8·46 per cent. other solids,=11·36 per cent. total solids.
,, ...	1	Contained 3·2 grains of Borates, calculated as Boracic Acid, per pint.
Shrimps (Potted) ...	1	Contained 1·8 per cent. Borates, calculated as Boracic Acid.
Canned Meats :—		
Beef (Roast).....	1	Contained a minute trace of Tin, but was passable.
,, (Corned)	1	Contained a minute trace of Tin, but was passable
Beef Steak (Minced)	1	Contained a minute trace of Tin, but was passable.
Beef	1	Contained minute traces of Lead and Tin, but was passable.
Chicken, Ham, and Tongue	1	Contained minute traces of Copper, Tin, and Lead, but was passable.
Mutton	1	Contained minute traces of Tin and Zinc, but was passable.
Salmon	1	Contained a minute trace of Tin, but was passable.

TABLE No. 17.

Return of Port Sanitary Work for the Year ending December 31st, 1906.

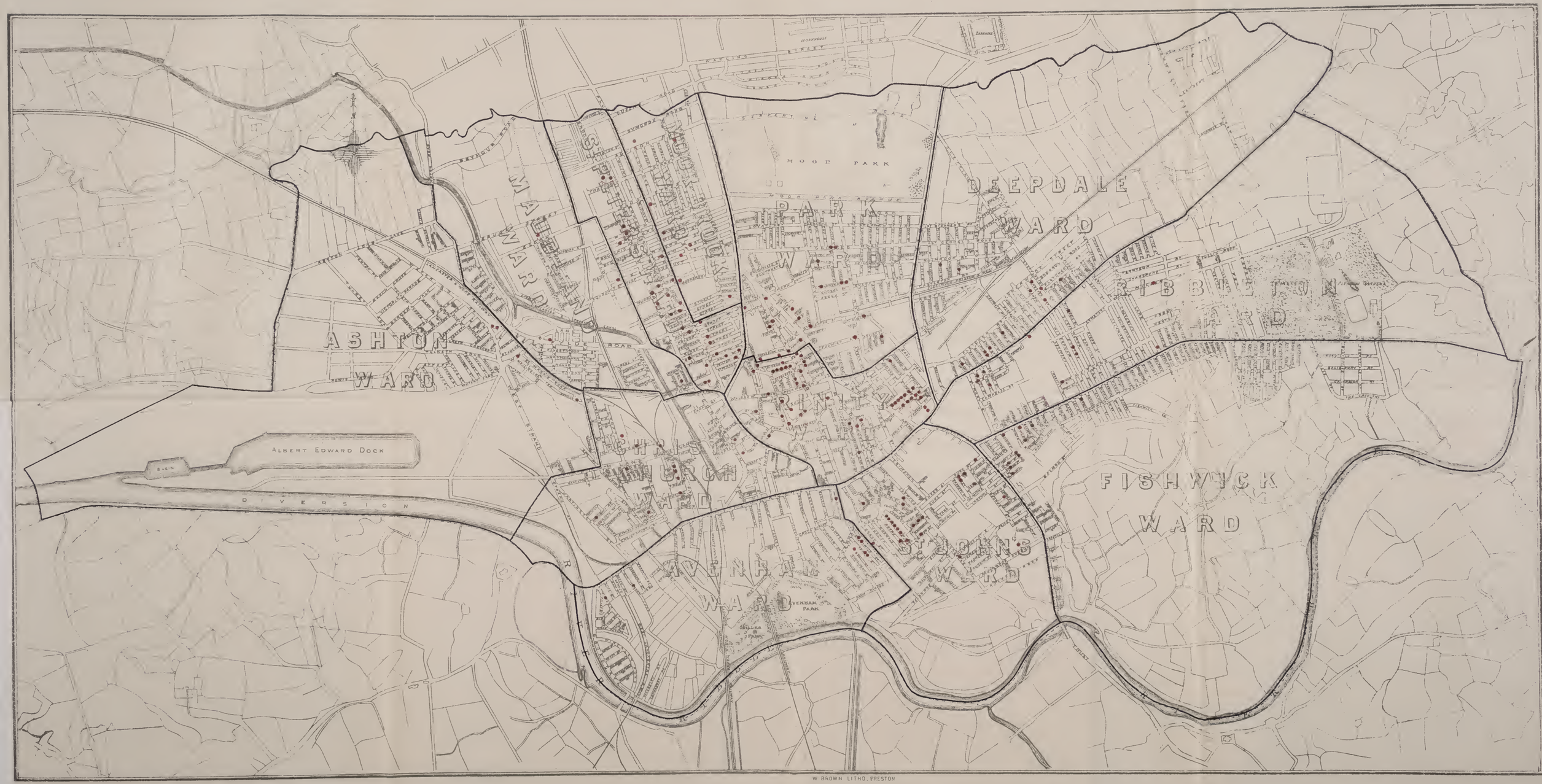
Steamships Inspected		1116
Sailing Vessels Inspected		128
Re-Inspections		120
Condition of Vessels Inspected	Good	1108
	Defective	136

Defects Remedied.

Forecastle Dirty	34
Do. Required Painting	16
Do. Deck Leaking	7
Do. Ventilation and Light Defective	12
Foul and Defective Water Closets	38
Foul Water Casks and Tanks	14
Dirty Provision Lockers	41
Do. Bilges	6
Do. Chain Lockers under Forecastle	4

INFANTILE DIARRHŒA, 1906.

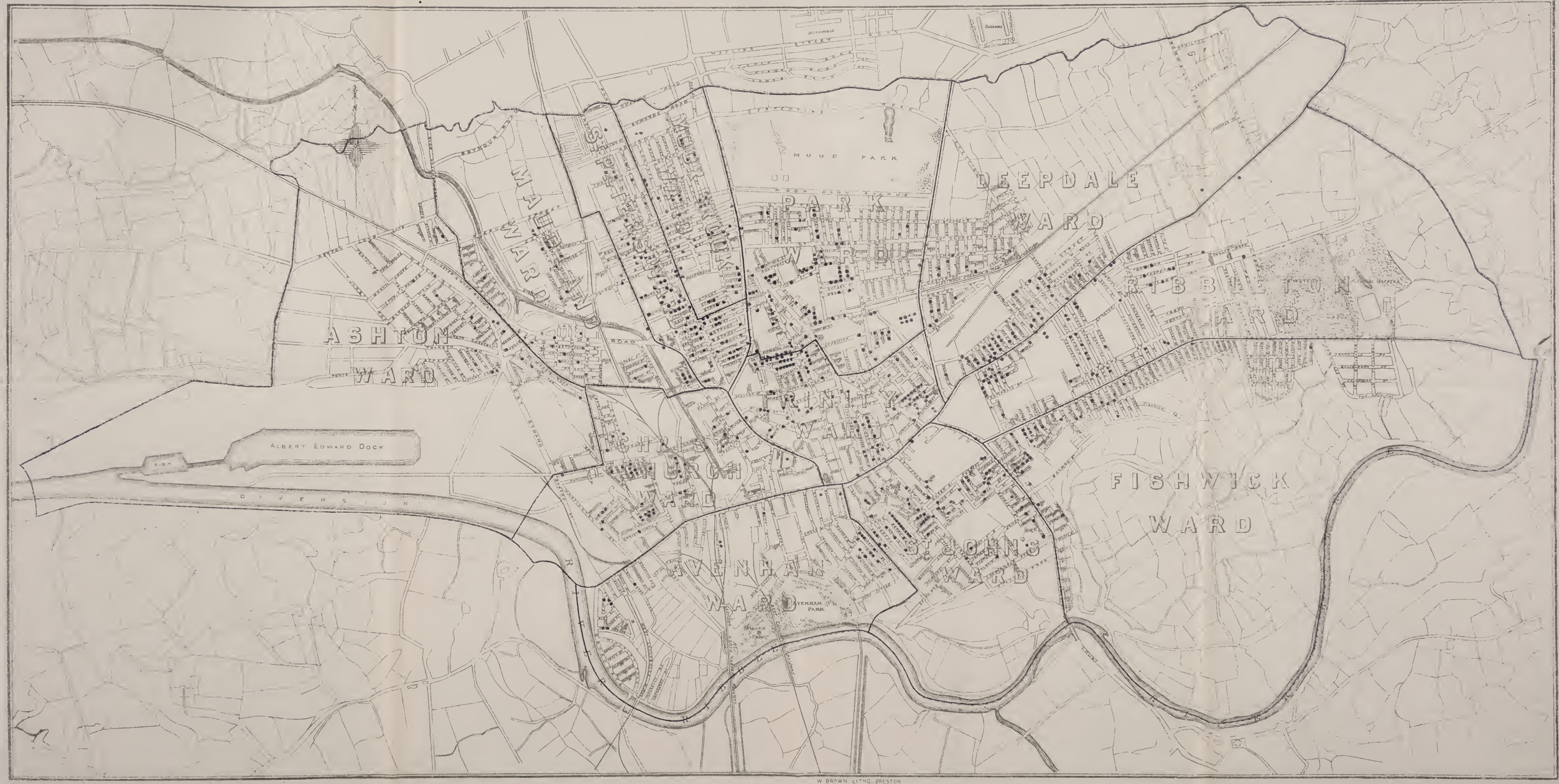
The Red Spots • indicate deaths from Diarrhœa under the age of one year.



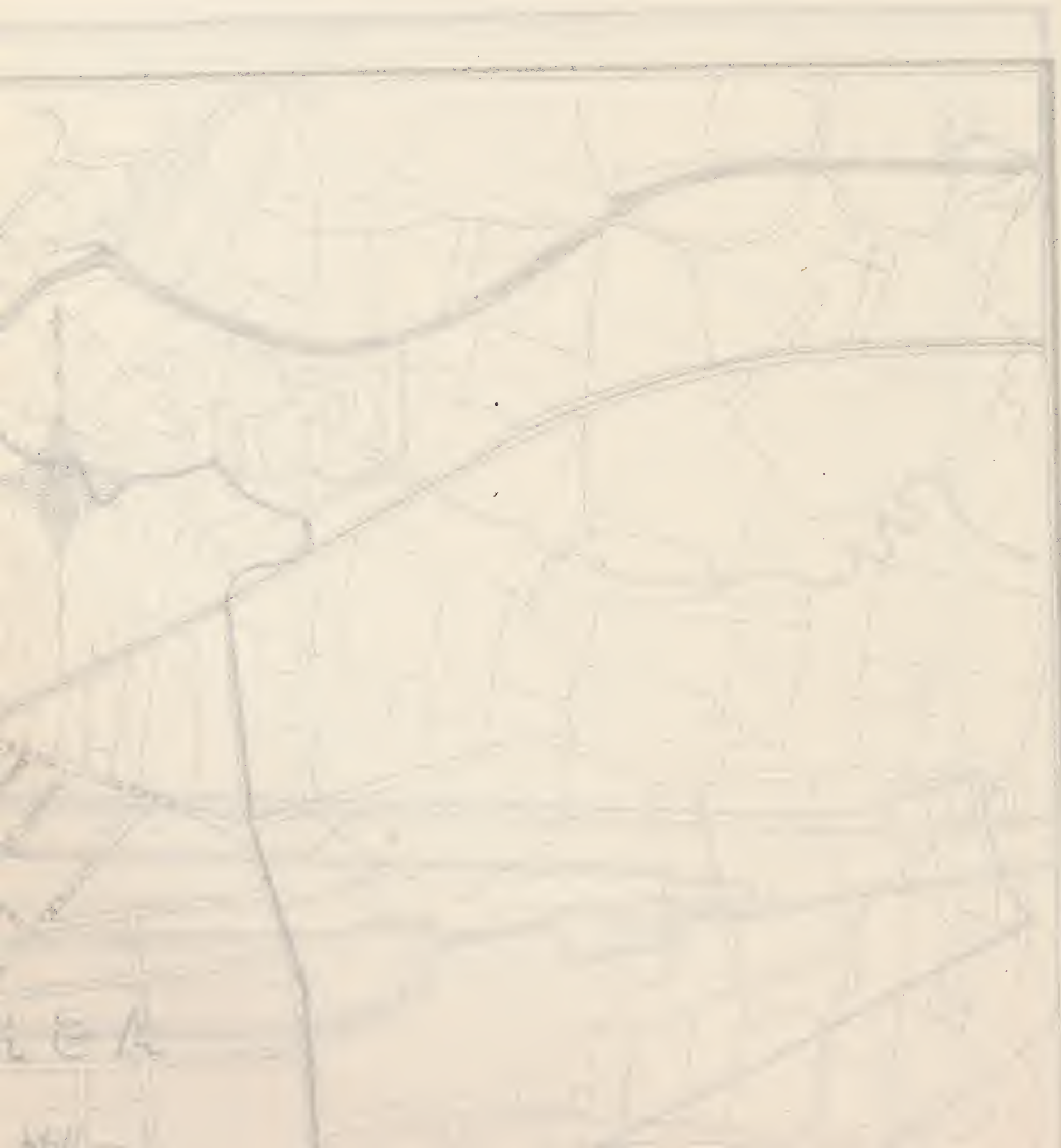
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INFANTILE MORTALITY, 1906

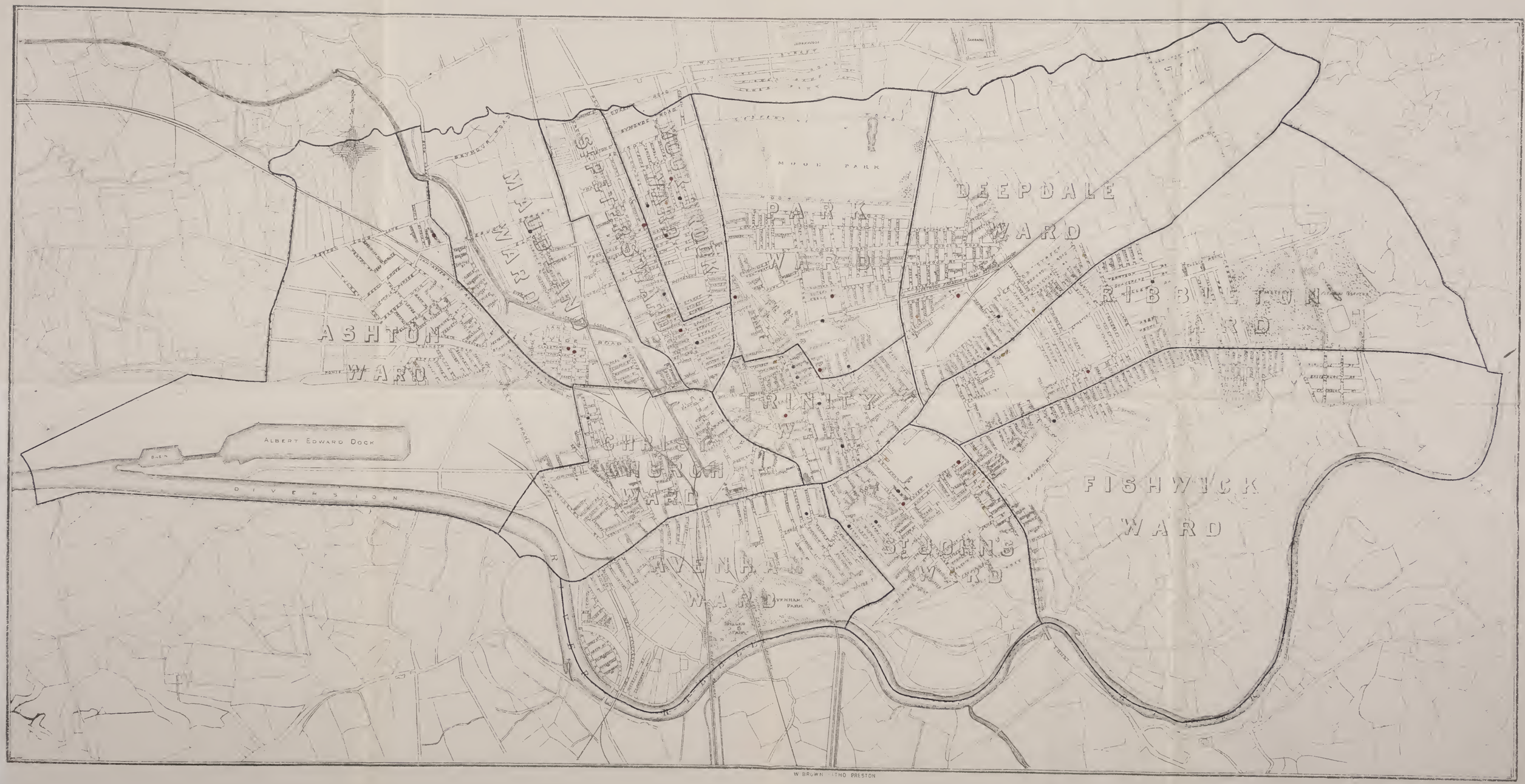


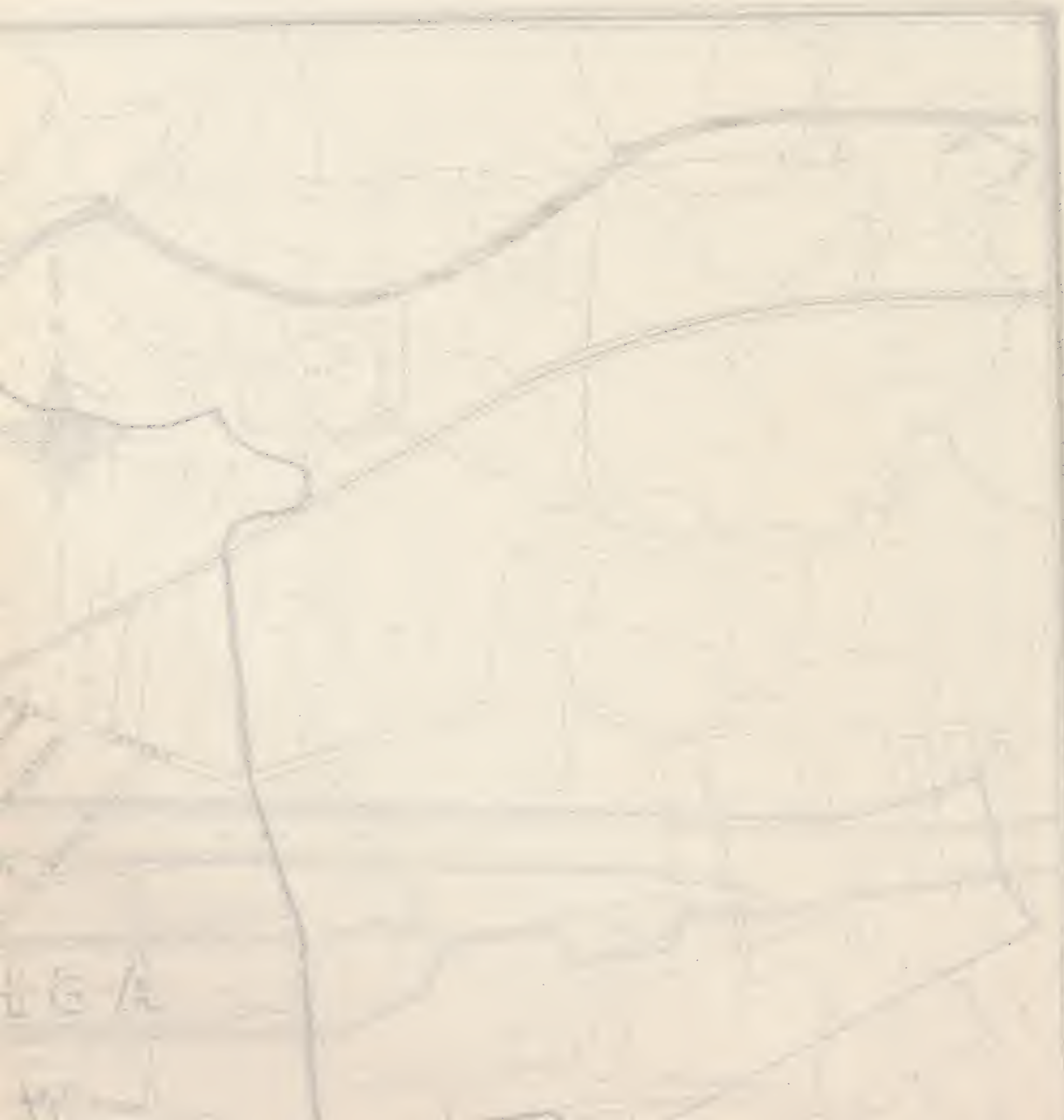
W. BROWN LITHO., PRESTON



ZYMOTIC DISEASES, 1906.

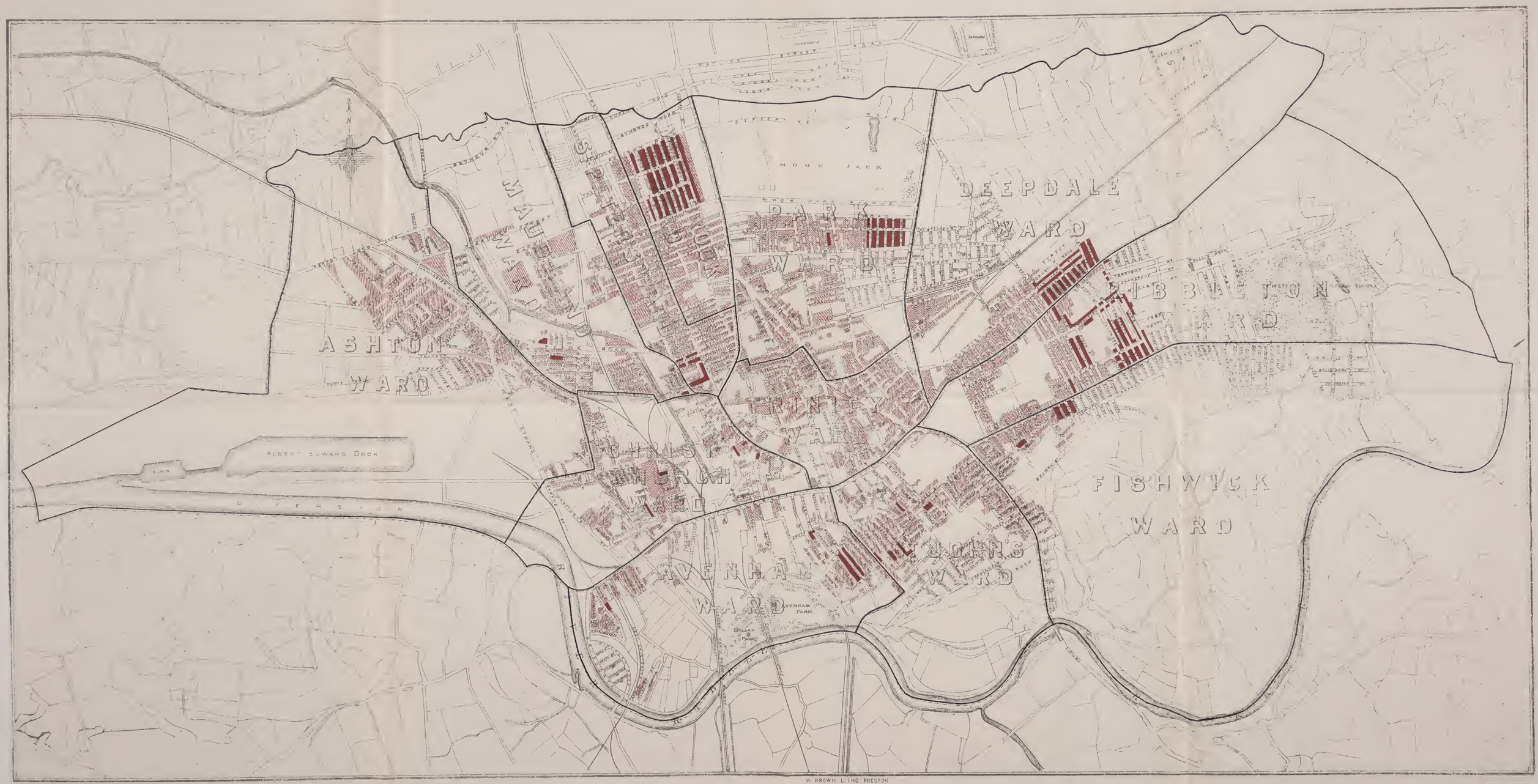
The Red Spots • indicate deaths from Scarlet Fever.
The Blue Spots • indicate deaths from Typhoid Fever.
The Yellow Spots • indicate deaths from Diptheria.





Portions coloured Red indicate Property reported upon and improved during the year 1906.

Those in lighter shade indicate Blocks dealt with during the previous twenty-two years.



W. BROWN LITHO. PRESTON

JAN. FEB. MAR. APL. MAY. JUN. JUL. AUG. SEP. OCT. NOV. DEC.

NUMBER OF CASES AND DEGREES OF TEMPERATURE	FORTNIGHT ENDING	13	27	10	24	10	24	7	21	5	19	2	16	30	14	28	11	25	8	22	6	20	3	17	1	15	29	NUMBER OF CASES AND DEGREES OF TEMPERATURE
RAINFALL IN INCHES		2·10	1·93	1·85	1·11	2·25	1·14	0·03	0·16	1·87	1·33	2·92	0·03	1·05	0·75	0·98	1·13	2·67	0·40	1·27	1·34	2·93	2·32	1·63	1·49	2·39	0·74	RAINFALL IN INCHES

MEAN DAILY TEMPERATURE

EARTH TEMPERATURE 4 FT

MEAN DAILY TEMPERATURE

MORTALITY FROM BRONCHITIS

MORTALITY FROM BRONCHITIS

MORTALITY FROM DIARRHŒA

MORTALITY FROM DIARRHŒA

JAN. FEB. MAR. APL. MAY. JUN. JUL. AUG. SEP. OCT. NOV. DEC